THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

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THE CULTIVATOR

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THE CULTIVATOR.

MONTHLY NOTICES.

☞ We have the pleasure of acknowledging the receipt of over *eight thousand* subscribers during the past month, exceeding the receipts, during the same time, last year, more than 2,500. For this handsome increase we are indebted mainly to the disinterested labors of those who have voluntarily, and in most cases gratuitously, so far acted as agents as to get up classes in their towns at the reduced rates at which the paper is furnished to Agents. Truly grateful as we are for these continued manifestations of approbation from the friends of agriculture, it will be our great object to render our paper more and more worthy the favor with which it is so liberally received.

COMMUNICATIONS have been received since our last, from John F. Dauphey, J. P., James Hall, Ellwanger & Barry, D. G. Mitchell, L. B. Langworthy, T. H. Hyatt, W. H. Whiting, L. W. Washington, E. V. W. Dox, S. Tillotson, S. D. Martin, G. L. Beckith, A Wiltse, L. F. Allen, Rambler, Wm. Summer, E. Comstock, P., M. P., C., E. N. Horsford, S. W. Jewett, R. L. Pell, J. M. Harlan, L. Durand, E. Hammond, E. R., C. Butler, Alex. McDonald, H. Hull, L. Smith.

☞ Dr. MARTIN'S excellent paper, for which he will please accept our thanks, will be given in our next—as also many other favors of correspondents, which are omitted this month for want of room.

Our thanks are due to Col. A. PETRIE, for his Address at the late Fair of the Herkimer County Ag. Society—to some unknown friend for the Address of F. J. BETTS, Esq. of Newburgh, before the Berkshire Ag. Society—to Hon. H. L. ELLSWORTH, Washington, for Prof. MORSE'S Letter to the Secretary of the Treasury on the subject of the Magnetic Telegraph—to A. FITCH, Sec. Washington Co. Ag. Society, for an admirable Report of the Transactions of that Society—to W. R. PRINCE & Co. Flushing, for their new "Descriptive Catalogue of Fruit and Ornamental Trees, Plants," &c., an interesting octavo pamphlet of over 100 pages.

D. T., Schenectady—By reference to the article again, you will see that the place, 'Boston,' is given.

H. S. W.—We do not know the price of Hay Presses. Will the makers of this article, give us their address, and the prices of their machines, that we may be enabled to answer inquiries on the subject.

W. M. wishes further information respecting the churn made in Saratoga, noticed in our last volume, p. 170. Will the inventor inform us where it is made, price, &c.

O. M. H.—The Skinless Oats have not, we believe, proved valuable in this country. A discount of 33 per cent will be made on the vols. mentioned. Thanks for your favor.

☞ Our friend at Bridgeport, Ct., who inquired for a remedy for scab in sheep, will find an article on this subject in the present number.

CAPONS.—"S." will find answers to his questions, at p. 197, vol. 9, and p. 67, vol. 10, of the first series of the Cultivator.

E. F. C., Providence—The 2 bbls. shall be secured for you. Thanks for your efforts.

SEEDLING GRAPE.—We have had several applications for cuttings of the seedling grape, noticed in our Dec. number, as in the possession of G. B. Emerson, Esq. of Boston, which, we are sorry to say it is not in our power to comply with, as we are not aware that any can be procured short of Boston.

APPLES.—We have received from ELLWANGER & BARRY, nurserymen, Rochester, specimens of the "*Northern Spy*" and other apples, described by them in this paper. The Northern Spy is probably the most valuable variety added to our list of apples for some years. Trees or grafts may be obtained of Messrs. Ellwanger & Barry, Rochester, N. Y.—We have also samples from S. W. JEWETT, Esq., Weybridge, Vt., of a seedling apple called "*Jewett's Best*,"—of medium size, fine flavored, nearly red, and covered with light specks—also, from S. B. CUSHING, Esq. Ithaca, specimens of the "King Apple."

CIDER.—We acknowledge the receipt of a sample of cider from H. & Geo. H. Rundle, of Greenvile, Greene county, N. Y. It is of excellent quality, almost equal to champaigne. Mr. Rundle made the last season, eleven hundred and fifty-three barrels. We are to receive his mode of manufacture for publication.

MAPLE SUGAR.—We have received from our old friend MOSES EAMES, Esq. of Rutland, N. Y., a beautiful sample of maple sugar, for which we return our thanks. The article is pronounced by all, fully equal to the best loaf sugar.

MR. COLMAN'S TOUR, Part III.—We learn from Mr. COLMAN, that he has completed his Survey of England, and is now busily employed in preparing the 3d Part of his Tour for the press. It will contain a chapter on Guano and other manures, and will be issued in March. This chapter will be of great interest at the present time, when so much inquiry is awakened on the subject of Guano in this country, and the facts and experiments detailed by Mr. C. will enable our farmers to judge as to the propriety of its use here.

QUERY.—A friend desires us to insert the following. How would the following composition answer for a coating for buildings, fences, &c. ? Water-lime, three-parts, sand and ashes, one part; to be mixed with water in which oil-cakes have been dissolved.

AGRICULTURAL PAPERS.

THE CONNECTICUT FARMER.—This paper, hitherto published at New-Haven, has been discontinued, and its proprietor has made arrangements with us to supply such of his subscribers as had paid him in advance, with the Cultivator, for the balance due them. This paper will accordingly be sent to them until the expiration of the time for which they had paid, when it will be discontinued, as we take no subscribers without payment in advance. Mr. J. M. PATTON, the former publisher of the Conn. Farmer, will act as Agent for the Cultivator at New-Haven, and will be glad to receive subscriptions of such of his former subscribers, as may wish to become subscribers to the Cultivator.

NEW GENESEE FARMER.—This paper commences its sixth volume under a new arrangement. B. F. Smith & Co., are still proprietors, and Dr. D. LEE, of Buffalo, well known as one of the ablest of the agricultural writers of the day, is editor. There is a horticultural department, conducted by P. BARRY. The form is octavo, of sixteen pages each number. It is hereafter to be called the GENESEE FARMER. Terms, fifty cents a year in advance.

THE ALBION, *or British Colonial and Foreign Weekly Gazette.*—This paper commences the year with an Agricultural Department under the charge of that founder of agricultural papers in America, JOHN S. SKINNER, Esq. Under the direction of this veteran in agricultural literature, we cannot doubt that the new department will greatly increase the interest and value of this paper. The number for Jan. 4th, has several excellent articles under the agricultural head.

NEW-YORK FARMER & MECHANIC.—This paper is hereafter to be printed in the newspaper form, and is designed to be a "family and business paper, devoted to Agriculture, Mechanics, Manufactures, News, Education, Temperance and Religion." It will contain authentic reports of the New-York Farmer's Club, the Conversational Meetings of the American Institute, the Proceedings of the Mechanics' Institute, &c.—Published by FLEET & STARR, 135 Nassau-street, New-York, at $2 per annum in advance.

SOUTHERN CULTIVATOR.—This monthly paper, published at Augusta, Georgia, (at $1 per annum,) has just entered on its third volume. An arrangement has been made with JAMES CAMAK, ESQ., of Athens, to conduct the editorial department. The name of this gentleman will at once be recognized by our readers, as associated with several excellent articles which have at various times appeared in our own Cultivator. We trust he will find the new field he has chosen, in all respects an agreeable one, and that the paper which is placed under his charge, will receive the liberal patronage which it will undoubtedly merit.

THE BOSTON CULTITATOR begins the year with quite an ornamental new dress. Besides being a *pretty* paper, it is a *good* one.

BRITISH AMERICAN CULTIVATOR.—This publication comes out with the new year in the octavo form. It is published at Toronto, Canada West, monthly, at one dollar a year. It is a useful paper, and we recommend it to the patronage of the Canadian public.

AMERICAN RAIL-ROAD JOURNAL.—The thirteenth volume of this valuable publication has just closed. The great increase of rail-roads within a few years, has rendered such a journal highly interesting. It is stated that since the publication of this work commenced, the rail-road system has grown from less than *one hundred miles*, either in this country or Europe, to several *thousands* in *each* country. The work is hereafter to be published weekly in a quarto form of sixteen pages, at $3 per annum. D. K. MINOR, editor. Office, 23 Chambers-st., New-York.

RAPID GROWTH OF A PIG.—According to the Maine Farmer, Ephraim Wood of Winthrop, lately killed a pig which weighed 357 pounds at only the age of 8 months and 15 days. This is nearly a gain of a pound and a half a day from the time of its birth to its death.

ENCOURAGEMENT OF AGRICULTURE IN CUBA.

FROM an advertisement which we find in the London papers, signed by the Spanish Consul-General in Great Britain, we learn that the Royal Board for the Encouragement of Agriculture in the Island of Cuba, have offered, among others, the following liberal premiums. They are well worthy the attention of our enterprising countrymen, whom we can hardly doubt will obtain their share of the honors and emoluments to be derived from the highly praiseworthy and patriotic efforts of the government and people of Cuba for the improvement of agriculture. The officers whose names are attached to this document, desire to notify all persons who wish to compete for these premiums that they may do so with the perfect assurance that they will be punctually paid.

One thousand dollars to the person who, during the month of December, 1845, shall soonest prepare, and put into the most perfect state of tillage, one "cababelleria of land, with the improved American plow, worked by mules, and managed by whites." *One thousand dollars* to the person who shall, on the first of December 1846, show two "cabellerias" of land well stocked with red clover of six months growth. *Twenty thousand dollars*, in annual instalments of $2,000, to the first person who, during the years 1845, '46 and '47, shall set up or establish a sugar estate or plantation, in which the cultivation of the cane shall be performed by thirty white families, consisting of a married couple each at least. *One thousand dollars* for the introduction of the bean used in the sugar estates of New-Orleans, as an article of food. *Four thousand dollars* to the person who shall show on the first of December, 1848, an artificial plantation of trees, of three years growth. *Six thousand dollars* to the person who shall introduce from the East Indies, 200 thriving and luxuriant stocks of sugar canes, &c. *Twelve thousand dollars*, in annual instalments of $2,000 to the person or persons who shall set up, during the years 1845 and '46, a permanent establishment for the improvement of the breed of horses—four stallions, viz: one of each of the following breeds, to be kept for public service, at prices to be fixed by the owner—one Andalusian, one Arab, one Norman, and one English—each to be of the genuine breed, of good form, size, &c. *Six thousand dollars*, in annual instalments of $1,000, to the person who shall import direct from England, one bull and six cows "of the finest and most reputed breed of that country." *Two thousand dollars* to the person who, on the first of December, 1846, shall show a herd of the "largest sized swine," introduced from the United States of America, or any other country. *One thousand hard dollars* to the person who shall, on the first of December, 1846, "present or produce, a breed of the largest domestic or barn-door fowls, (gallinas,) hatched or born on the Island, of a breed introduced from the United States of America, or any other country."

GREAT PRODUCT OF WHETT.—Hon. E. MACK, in his address before the Tompkins county Ag. Society, states that Mr. E. J. Ayers, of Ulysses, raised the past season, *fifty-seven bushels of wheat* to the acre. He observes that several others, as he has been informed, have raised from forty to fifty bushels to the acre. "This equals," he remarks, "the improved yield in the best portions of England and Scotland, and shows what the soil of our country, with skillful management, is capable of producing."

RIBBON HOUSES.—We see in the Genesee Farmer, a description of a new mode of building houses. The sills are laid upon a wall. The boards or ribbons used for the superstructure are of hemlock, four inches wide and one inch thick, laid up in the manner of brick work, taking care to break joints. The partitions should be carried up and worked into the wall with the main body. The partitions are carried up to the roof and a plate dispensed with, though a ridge-pole is used. The boards are nailed with 8 penny nails, except four or five of the last courses which are nailed with 10 penny. The plastering of the inside is applied directly to the walls. It is said to make a very warm and cheap house, and the only alteration recommended from the plan here described, is to use boards an inch and a half, instead of an inch thick.

PLATE II.

MOUNT HOPE,

The Residence of E. P. PRENTICE, *Esq.*

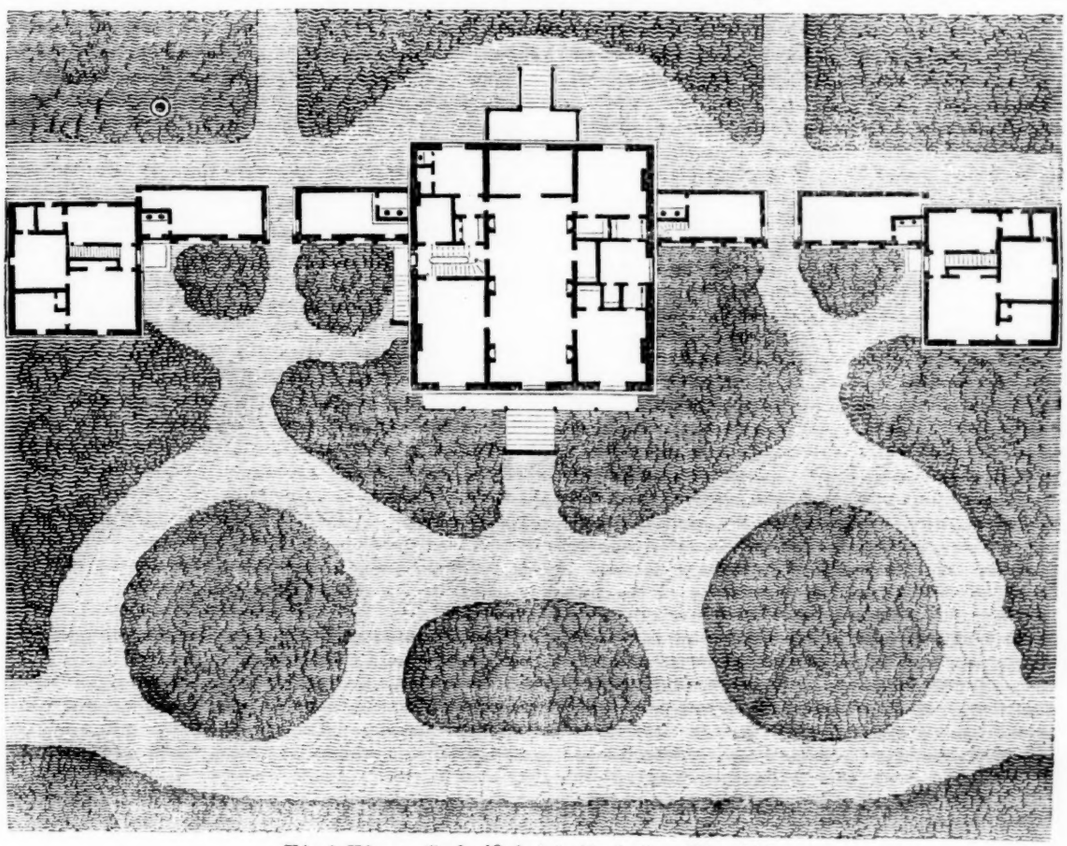
WE have the pleasure of presenting our readers this month, with a view of Mount Hope, the residence of E. P. PRENTICE, Esq., well known to the farmers of this State for his enterprising and successful efforts in the introduction of improved breeds of cattle—engraved on steel by JORDAN of New-York, from a drawing made expressly for The Cultivator.

Mount Hope is situated on the west bank of the river, about a mile below this city. It is a beautiful natural situation,—one of the finest indeed of the numerous beautiful situations on the Hudson,—much embellished by art, but not reduced to artificial stiffness. In front of the house is a fine lawn of ten or fifteen acres, descending from the house to the road, interspersed with trees, and flanked on either side by gently rising hills covered with scattered groups of trees and dense copses. In front, and about thirty rods below the house, is a fine elliptical sheet of water, 150 feet long by 100 wide, bordered by trees, and surrounded by a neat fence, and in the center of which a perpetual fountain, in the form of a fine delicate silvery jet, shoots upwards fifteen feet or more in height.

The view from the house is of uncommon beauty, and embraces the city on the left, and the Hudson for many miles below, until lost among the blue hills. The distant peaks of the mountains of Vermont and Massachusetts are distinctly visible. The surface of the river is constantly spotted, during the season, with white sails moving up and down its channel, and the scene enlivened by the occasional arrival and departure of steamboats, and of trains on the Boston rail-road, which is seen for many miles from this place.

On the right of the house is a well-arranged flower garden, and in the rear vegetable and fruit gardens, with a large and fine natural grove beyond on a greatly varied surface—the whole furnishing a most refreshing and lovely retreat from "the tumult and smoke of the city."

In the annexed figure, a view is presented of the first floor of the house, together with the adjoining grounds



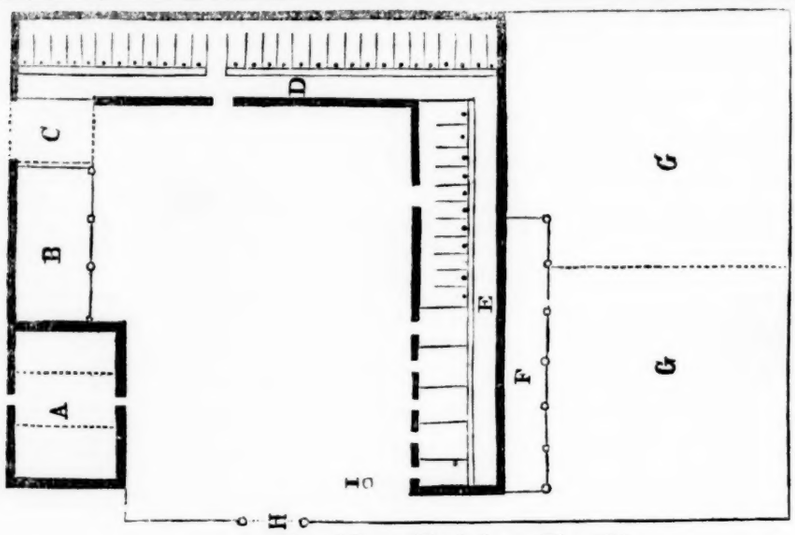
First Floor—Scale 48 *feet to the inch*—(Fig. 14.)

The farm at Mount Hope, consists of 127 acres, 25 of which are in wood. The whole of the cleared portion has been brought to a high state of fertility, as may be inferred from the fact that it maintains on an average over fifty head of neat cattle, (of various ages, from calves to full-grown animals,) six horses, and from fifteen to twenty swine. All this stock is actually supported from the farm. Grain or meal has sometimes been purchased, but the amount of hay, &c. sold, has been more than sufficient to balance this. In addition to supporting the stock, the farm and garden produce grain, vegetables and fruits, amply sufficient for home consumption.

The soil of the greater portion of the farm may be said to have been naturally of not more than medium quality, and its extraordinary fertility and productiveness have been caused by the application of manures. Besides the manure made from the stock of the farm, Mr. Prentice makes use of the animal matters, and other waste, from a large manufactory of various articles of fur. The waste from the factory is a very powerful manure, and being mixed with earth, the scrapings of the streets, &c. constitutes a valuable dressing for all crops. The barn yard is well calculated for preserving the manure, and the cattle are kept constantly well littered, either with straw, or fine shavings and dust made by a planing machine. The litter absorbs much of the urine, which would otherwise be wasted.

Fig. 15 exhibits the ground plan and the internal arrangement of Mr. Prentice's barns, and the apartments for stock, which it will be seen are convenient and judiciously contrived.

Among the attractive objects about Mount Hope, is the beautiful herd of Improved Short Horn cattle. Many individuals of this herd have at various times received the highest premiums of the New-York State Agricultural Society, and portraits of several of them have appeared in former volumes of the Cultivator. The first of Mr. Prentice's herd, were a pair, Leopard and Trim, purchased of the late Hon. Stephen Van Rensselaer in 1831. To these were added Susan, imported by Mr. G. W. Smith in 1832, Matilda, out of Heart, which was imported by Thomas Hollis, Esq., and the following animals import-



Plan of Barn, Yard, &c.—(Fig. 15.)

MR. PRENTICE'S BARN.

Explanation.

A. Barn 30 by 40 feet, with threshing floor.

B. Shed with hay loft, 21 by 40 feet.

C. Gateway with hay loft over it.

D. Passage 120 feet long, with 29 cattle stalls on the right, each stall with a post and sliding ring for fastening the halters.

E. Passage with stalls & rooms for calves, &c.

F. Shed for sheep.

G. G. Sheep yards with high close board fence.

H. Entrance gate, thro' picket fence 12 feet high for confining hens.

I. Pump.

ed mostly by Mr. Prentice, direct from England, viz: Appolonia* and Splendor, imported in 1838, 9—Princess, Miss Scotson, Flora, Aurora, and Snydus, in 1840—and Moss Rose, Violanta, Esterville and Catharine, in 1841. These were selected from the noted herds of the Earl of Derby, Samuel Scotson, Esq. of Toxteth Park, Messrs. Whitaker, and R. C. Lowndes. The animals above named, are all registered in the Herd Book, and they, with their progeny, constitute the present Short Horn stock at Mount Hope.

At the first Cattle Show of the N. Y. State Ag. Society at Syracuse in 1841, Mr. Prentice received the second premiums on bulls, cows, two year old heifers, and the first premiums for yearling heifers and bull calves. At the Show of the same Society at Albany, in 1842, the first premiums for the best bull, two year old bull, bull calf, and heifer calf, and second premiums for cows, yearling heifers, and heifer calves, were also awarded to Mr. P. At the last State Show, holden at Poughkeepsie, Mr. Prentice only exhibited from his herd three heifers, for two of which he received the highest premiums in the class. Of one of these heifers, "Esterville," we present our readers with a very accurate portrait at page 56 of this number.

This herd of cattle cannot be large consumers—after making due allowances for the fertility and production of the land, the quantity of stock kept is certainly remarkable. Though no particular trials have been made with any of the cows to ascertain the quantity of butter they would yield, it is known that several of them are extraordinary as milkers. *Appolonia* is one of the best dairy cows we have ever seen. She, and several others have each given from twenty-five to thirty quarts of milk per day, for several weeks in succession, with only grass feed.

In 1842, Mr. Colman gave the following account of Mr. Prentice's stock, in the New Genesee Farmer, of which paper he was at that time editor:

"If any man, however, chooses to see this stock in perfection, let him go to the farm of E. P. Prentice of Albany; and if he has any prejudices of any kind against the stock, and is not then prepared to yield every one of them, I can only say he is differently constituted from what I am. Mr. Prentice has about forty animals of the Improved Durham Short Horn, of pure blood and of the highest pedigree. He has one cow with seven heifers of her own progeny along side of her, six of which were in milk. A stock of larger size, of more symmetrical form, of equal beauty, of finer feel, of more thrift, of greater productiveness, I never have seen nor never expect to see; nor do I expect to see a herd better kept, nor better arrangements for their keeping. To an amateur, to an inquisitive farmer, who desires to see what skill, intelligence and care can effect in moulding and improving the animal frame, it is worth a journey from Rochester to Albany on foot to see this stock. It is worth almost as much to see Mr. Prentice's stable arrangements and the tidy manner in which every thing is kept. Some few farmers among my acquaintance, in going there, would hardly know that they were not in their own parlors."

Besides the Short Horn stock above mentioned, Mr. Prentice has a few very superior Ayrshires. These are a cow imported in 1842, and a heifer which she dropped on the passage, with one or two others produced since. They are beautiful animals, and have evidently superior qualities for the dairy.

The community is also indebted to Mr. Prentice for the importation of choice flocks of South Down and Cotswold sheep. These were imported in 1837. The South Downs were selected from the flocks of Messrs. Riga and Putland, Sussex, and the Cotswolds from the flock of Mr. Riga, Cross-hands, Wiltshire. Finding the breeding of sheep in connexion with cattle, rather inconvenient, Mr. P. disposed of the former to Mr. J. McD. McIntyre, in 1841.

* With Appolonia, there was shipped a beautiful and celebrated cow, called Wood-Nymph, which unfortunately died on the passage.

IMPROVED PLOWS.

THE improvements in agricultural implements of various kinds, within the last twenty or thirty years, has been very great. In the PLOW, particularly, there has been almost an entire revolution, both in the kind of material used, and in the general form and construction. A single example of the manner in which, within the memory of the writer, (thirty years,) the operation of plowing was performed in a New-England neighborhood, not by any means behind the age in agricultural advancement, will serve to show in a striking light, the improvement which has been effected in this most important implement of husbandry. In plowing "green-sward," the force commonly employed was three yoke of oxen, with a horse to lead, or two yoke of oxen and a pair of horses, with two drivers, one man at the plow-handles, another at the beam to "bear on" in hard places, and, if the ground was at all rough, a man to follow the plow with a stout hoe to mend "baulks," and turn over furrows. An acre was considered a good day's work. Now mark the contrast. On the same farms, the same fields, with a tougher sward, are now plowed with one yoke of oxen, (sometimes with the addition of a horse,) and often with only one man, who is both plowman and driver. An acre and a half is plowed in a day, in a style infinitely superior to the former mode. Besides, notwithstanding the superior excellence and durability of the new implement, its cost is at least one-fourth less than that of the old one.

This modern improvement in plows, it may be safely averred, originated in the encouragement offered by agricultural societies. The Massachusetts Society for the Promotion of Agriculture, early manifested a deep interest in this matter. The institution of plowing matches

in this country, the credit of which belongs to this Society, it is believed gave the first decided impulse to improvement in this direction. Their first plowing match took place at Brighton in October 1817. The offer of premiums for the best plow, by this, and other associations, soon followed; and by the competition which was thus in various ways created, improvements were started and pushed on, till at the present time a degree of perfection has been reached in some of the best constructed plows, to which it seems almost impracticable to make any farther additions.

As Massachusetts took the lead in the institution of plowing-matches, and the offering of premiums for the best plows, a brief sketch of the progress of improvement in that State, will be read with interest.

At some of the first trials of plows under the direction of the State Ag. Society, at Brighton, those made by Jesse Warren, of Dedham, Charles Howard, of Hingham, and —— Hall of Sutton, attracted particular attention. The first premium at the first trial, (1817,) was awarded to Mr. Howard and his partner. At this trial, the once famous English *Beverstone* plow, was brought into competition with those of American manufacture, by the late JOHN PRINCE, Esq. of Roxbury. For several years, the plows used at these trials, were made of wood, ironed in the old mode. A cast iron mold-board, the share and other parts being made as before, was after a while adopted by Mr. Howard, and about the same time, some plows wholly of cast-iron were introduced. The latter were Tice's and Wood's. Some cast iron plows were also imported from Scotland. But the iron plows were slow in coming into use. Those of the Tice and Wood patterns, were frequently used at the Brighton trials. They were admitted to run with less resistance than most of those made of wood, but from their extreme shortness, and the abrupt position of the mold-board, they did not turn a sod-furrow so well and handsomely as was desired, and on this account were not very successful in obtaining prizes. The castings were also bad—the plows broke a great deal, which created a prejudice against cast iron plows, not very easy to be overcome—and various circumstances combined to throw the Wood and Tice plows into disuse.

In the mean time the mechanical principles on which the plow should be constructed, engaged the attention of men of the strongest minds. The late Hon. TIMOTHY PICKERING, who, after his retirement from an important political post, the Secretaryship of State, to which he had been appointed by Washington, engaged in agricultural pursuits with great zeal, laid down the following rule for the construction of the mold-board:

"Having fixed a straight line, by one cut of a saw from the upper corner of the mold-board behind, to its point forward, cut away the wood above and below that line in such a manner that when finished, if you carry a straight rule from the fore to the hind part, keeping it all the way at right angles with the straight line, it shall touch the face of the mold-board, in its whole breadth, in straight lines, through its entire winding, so that its upper corner behind shall overhang the lower sufficiently to effect a complete turning of the furrow slice."

The above rule is in accordance with the principles advanced by Mr. Jefferson in his letter to Sir John Sinclair, and which have been and are still adhered to, in all modern improvements of the plow.

As the trials of plows by the Massachusetts Society, annually brought the various competitors together, a progressive improvement was every year observable. Mr. Warren, by study and practice, greatly improved the construction of his plow. It made beautiful work—many premiums were awarded to it at the Brighton plowing-matches, where for several years it was much esteemed. Mr. Warren finally got out patterns for iron plows, on the general principle of his wooden one. Some of these we have held with our own hands. They were good plows, though destined soon to be eclipsed by better ones.

Mr. HOWARD continued to add improvements to his plow, and was very successful in obtaining prizes. About the year 1825, Messrs. PROUTY and MEARS, with various patterns of the "Hitchcock" plow, became conspicuous among the successful competitors. The Hitchcock plow may be considered the basis on which has been engrafted the various improvements that in these days have rendered the plows of Messrs. P. and M. famous over the whole country.

Other competitors also appeared in the field. Prominent among these, were Messrs. RUGGLES, NOURSE and MASON, who were not long in securing a share of the honors to be gained in the contest. For several years past, it may be said that the competition in Massachusetts, has been between the plows of the three last named firms—that is, between those of Howard, Prouty & Mears, and Ruggles, Nourse & Mason.

Each of these concerns manufacture a large number of plows of various patterns, and there are large ware-houses in Boston, where all of them, as well as other implements, are extensively sold. We have before spoken of the establishment of Messrs. BRECK & Co., (where Howard's plows are sold,) and that of Messrs. RUGGLES, NOURSE & MASON. In our visit to Massachusetts in October last, we visited the warehouse and manufactory of Messrs. D. PROUTY & Co., successors to Prouty & Mears. Their store is in Boston, and their manufactory in South Boston. The latter is a very large establishment. The building is 120 feet long, 36 feet wide, and four stories high. They manufacture plows of various patterns, though they are mostly on what is called the "centre-draft" principle—that is, the beam is placed over the center of the weight of the plow. These plows have acquired an extensive reputation, and orders are constantly received for them from all parts of the Union.

Messrs. P. & Co. also make many subsoil plows of different kinds—also harrows of very superior construction—sowing, or planting machines—straw-cutters, and most other farming implements. Every tool is made of the best material, and in the most finished style of workmanship. All their operations seem to be conducted with much system, and great regularity and neatness are observed throughout.

CORN-STALK SUGAR AND MOLASSES.

MR. WILLIAM H. DEADERICK, of Athens, Tennessee, gives a communication in the Tenn. Agriculturist, on the manufacture of corn-stalk sugar. Mr. Deaderick has made more or less of this article for the three last years. During the last season he made over 100 gallons, or one hogshead of sugar. By planting corn at various times, the molasses season, he observes, can be prolonged in that State from the middle of July to the middle of October. He directs that the mill for grinding the stalks, be made with three rollers, at least twenty inches in diameter, and twenty-six inches long, and four inches above the cogs. The cogs four inches wide, and eighteen inches below the cogs. The necks about three inches long, and six in diameter, with a smooth iron band fitted on to prevent their wearing. The stem of the middle roller, should be twelve or thirteen inches in diameter, and five or six feet long, the neck to be received in a corresponding hole in a transverse beam resting on two posts about twenty-five feet asunder. This arrangement will cause the mill to run more equally than if there was no support above. There should also be some contrivance of wedges and keys, with which to adjust the outside to the middle roller.

Mr. D. remarks, that for the sake of convenience, it may be proper to assign to the corn-stalk two stages in its growth, as the most suitable for making molasses and sugar: 1st. When just in roasting, or boiling ears. 2d. When it has passed out of the roasting-ear stage, and become too hard for cooking. The syrup made during the first or roasting-ear stage, if boiled moderately thick will very much resemble honey, both in appearance and taste. In the second stage, which Mr. Deaderick considers on the whole the proper one, or when the corn has become too hard for cooking, the syrup will more nearly resemble that made from the sugar-cane, and is the age of the stalk at which the syrup is most disposed to granulate. As the stalk ripens, the molasses will become darker and not so agreeable to the taste. In the roasting-ear stage, it requires ten gallons of juice to make one of syrup. In the second stage, or two weeks

later, eight gallons will do the same. One gallon of syrup, boiled to the point of granulation—that is, when on taking a small portion (as warm as it can be borne) between the thumb and fore finger, it can be drawn into a thread an inch and a half long—is equivalent to ten pounds of brown sugar for any of the purposes for which that article is commonly used. Stalks from which the ears have been pulled in their embryo state, will afford one-fourth more syrup than those on which the ears have been permitted to arrive at their full growth. Large stalks are preferable to small ones, as it takes nearly as much time to strip and prepare for the mill the latter as the former.

The same difficulties have been experienced in regard to speedy granulation, as heretofore. It is evident that superabundant mucilage in the juice, retards the granulation of the syrup, but it is hoped more mature experience will remove this and all other obstacles to complete success. It is satisfactorily ascertained that if the syrup is properly made and placed in shallow vessels, in a moderately warm situation, it will granulate, if sufficient time be allowed it for that purpose. Last season a small portion was set aside, and five months elapsed before the chrystalization was completed, leaving, however, at last, little or no molasses. Mr. D. has several parcels which until August last have been slowly undergoing this process, some of which, he observes, are ready for drawing, and that doubtless the whole will be completed in a few weeks.

Mr. Deaderick thinks it all important that the juice be pressed out and set to boiling as speedily as possible after the stalks are cut; not more than two or three hours should elapse before this is done, for if the stalks are permitted to lie, or the juice to stand longer than the time mentioned, fermentation will commence and infallibly injure the quality of the molasses. As soon as a sufficient quantity of juice is received from the mill, it should be allowed to stand for a few minutes for the coarser particles to settle, and then be strained through a coarse cloth, and a table-spoon full and a half of clear lime-water added to each gallon of juice, and then poured into the kettle and carefully watched and skimmed during the whole process of boiling. Care must be taken that the iron vessels used are entirely free from rust.

Mr. D. states that the molasses thus produced has been pronounced over and again, by persons who have partaken of it, superior to the imported article; all, without exception, were fond of it, whilst among them were several who reject the use of cane molasses altogether.

Mr. Deaderick thinks the manufacture of corn-stalk sugar and molasses, is susceptible of being made a matter of the greatest importance—that which has been accomplished by a few, can be done by every farmer in the State—and that "it is as absurd and unnecessary for a farmer to purchase his sugar and molasses as it would be to import his soft soap, candles, or any other article of ordinary domestic production."

HOT BEDS.

Those who intend raising early vegetables, either for domestic use or for market, had better make some preparations for the business, this month. Cabbages, tomatoes, cucumbers, egg-plants, &c., may be had three or four weeks earlier, if started in a hot bed in early spring, and put out after the weather has become steadily warm. In making a hot-bed, mark out the ground the size of the frame to be used, and make an excavation to the depth of a foot, or if the ground is quite dry, eighteen inches; put in good horse manure to the thickness of two feet, and put on the frame and glasses. When the heat is sufficiently raised, put on six or eight inches of good mould; that made from clean grass-sods which have been piled and become entirely rotted the year before, is best; and when this is warmed to the proper degree, which can easily be told by applying the hand to it, plant the seeds. Care should be taken that there is not too much heat, especially when the sun shines. If there is too much, raise the glasses; and always let in as much air as practicable with keeping up the requisite degree of heat. Hot-bed plants require a great deal of water, which should be supplied from a watering-pot. If the weather should be so cold as to render it necessary, the bed should be protected by mats and straw.

Permanent hot-bed frames may be made of bricks. A false bottom is laid two or three feet from the ground, made of cast-iron, or iron bars, laid so closely together as to answer the purpose, on which is placed the earth for the plants. A door is left at one end of the brick-work, under the floor, to throw in manure, and another door at the opposite end, for taking the manure out. Thus a constant and regular supply of heat may be conveniently kept up, by only putting in fresh manure as the decomposition proceeds.

MODEL AND EXPERIMENTAL FARM.

Several newspapers have suggested that the Smithsonian bequest, which, together with the interest up to the present time, it is said amounts to six hundred and ninety thousand dollars, should be appropriated to the establishment of a Model Farm. It appears that a bill was introduced by Senator Tappan, of Ohio, towards the close of the last session of Congress, for the purpose of effecting this object, and we are informed that petitions are now in circulation in various parts of the country for the passage of that bill.

The design of the benevolent donor, Mr. Smithson, in making this bequest, was the founding of an institution at Washington, for the "increase and diffusion of knowledge among men." One cause of the delay of our government in acting on this matter, has undoubtedly been the difficulty of fixing on a plan of an institution by which the original design of the donor might in the best manner be carried out. The very general terms in which that design is expressed, seem to admit of considerable latitude in the choice of a plan. The particular *kind* of "knowledge" which it was especially designed to "increase" and "diffuse," is not mentioned. It may, however, be safely claimed that the bestowment of the *greatest good* on the human family, was the grand aim and intent of Mr. Smithson in this disposition of his property. And how, we ask, can this philanthropic and praise-worthy object be better accomplished, than by the endowment of an institution for the "increase and diffusion of knowledge" in relation to that art which constitutes the very foundation of national independence, and individual support?

We have not been so fortunate as to meet with a copy of Mr. Tappan's bill, but we understand that the proposed Model Farm is to consist of "ten acres of ground in the vicinity of the Capitol," the general direction and management to be vested in twelve citizens appointed by Congress. Students to be instructed in the institution gratuitously, &c. The trial of plants, and the distribution of such fruits, seeds and vegetables as shall be found useful and adapted to the various sections of the country, to be among the leading objects of the institution, while other means of usefulness will undoubtedly be improved.

It strikes us that the quantity of land, ten acres, is less than would be expedient, having in view all the objects to which such an institution should be devoted. It should be remembered that there are many important questions which it is desirable to settle by practical tests. In addition to the trial of plants, it is important to decide the relative value of manures, and their particular operation in promoting the growth of plants on various soils, and under different circumstances as to heat, moisture, &c.—the comparative expense of production and the value of different crops for feeding animals, whether for slaughter, for the dairy, or for labor. Careful and long-continued experiments are requisite, and should be carried on for the purpose of deciding these points. The most careful trials should also be made to ascertain as far as practicable, the comparative advantages of different breeds of domestic animals for special purposes, and their relative adaptation to different modes of feeding, &c. A sufficient quantity of land for successfully prosecuting all these and other necessary experiments, it seems to us should be secured in the outset; especially when it is considered that from the cheapness of land within a convenient distance

of the proposed location, the addition of fifty or a hundred acres would make but a small item in the expense.

The subject of a Pattern or Model farm, in connexion with an Institution for the instruction of youth, in the State of New-York, has been at different times considerably agitated, and two or more bills granting charters for this purpose, have been passed by the Legislature, but different circumstances have combined to prevent any active measures being taken for the commencement of the enterprise. The difficulty of bringing into operation an institution, embracing in its plan and design *all* that it is desired to effect, has induced the suggestion that it is better, for the present, to attempt something on a less extended scale, but with a greater certainty of its practicability and accomplishment. We allude to the proposition of purchasing a farm for making experiments and deciding doubtful points in husbandry. The project need not involve an expensive outlay—the farm may consist of about fifty acres—and all that would be requisite to carry it on, after the first expense of putting it in order, would be the hands to perform the labor, and a competent superintendent to conduct the experiments and all operations, under the direction of a suitable board of officers.

The proper object of all inquiry, is the establishment of FACTS—such only being of practical utility—and by no other means within our knowledge, can this object be so well promoted, as by some plan like what is here proposed. It is certain that much good has already been effected by various laudable exertions which have been made in behalf of agriculture; but there are questions of the most important consideration—questions involving points on which the prosperity of the farmer actually depend, that have not been, and cannot be decided by any thing short of systematic and careful experiment. By the aid of an establishment like this, a series of experiments might be instituted that could be *relied* on—we need not be left to *guess* at the results, as is too often done in what are *called* experiments. The operation of different manures, and the application of substances for the prevention of diseases in plants, or to ward off the attacks of insects, would here be tested on the same soil and under precisely the same circumstances. Comparative trials would be made with plows and other implements. The superiority possessed by one breed of animals over another, if any really exists, would be demonstrated in the the actual *profits* given under an impartial and just experiment. Free from the bias of individual selfishness, or preconceived and favorite theories, the trials would be fairly conducted, and the results as fairly made known. The grand object being the acquirement of TRUTH, *Nature*, in every operation would be asked a question—her answer would be promptly noted and treasured up in the storehouse of knowledge for the future benefit of all.

For an object like this, we think there can scarcely be a doubt that the Legislature would grant the necessary appropriation. The trifling sum required would certainly be but a small return for the liberal aid which has been received from the agricultural class, in support of institutions from which they have derived but little comparative advantage.

HORTICULTURAL NOTICES.

ALPINE STRAWBERRIES.

C. M. Hovey, in a late number of his Magazine, speaks of the abundant supply of this variety of strawberry, in the markets of Paris, during the early part of *autumn*. He states the price at about 15 cents per basket; the basket containing a quart or more. We infer from his remarks that it is not well known in this country; its merits as a free grower and a great bearer, should make it more known. As with the Wood strawberry, there is a red and white sub-variety, which it also strongly resembles in the peculiar sweetness of the fruit, too much so to please some palates. It differs from the Wood in its more oblong fruit, and by its long continued season of bearing. It often yields but little during the heat of summer, but with proper culture, bears freely during a large part of autumn. We have seen good fruit picked in a rare case, on the sixth day of 12 month, (Dec.,) and a good dish of them on the table the first of the same month, in both cases from a garden in Western New-York. They often succeed best when partially shaded, as under a high fence, or fruit trees. Hovey says, "In the gardens of Luxembourg, we saw nearly quarter of an acre, planted out in rows, three feet apart, and a row of dahlias between every other row, the alternate spaces answering for walks. The dahlias afforded some shade, though it is less needed in the climate of Paris, and the vines [stalks] were loaded with fruit." From a long acquaintance with this variety, we venture to recommend their very general culture.

NEW ORNAMENTAL SHRUB.

A new and handsome shrub is noticed in the Botanical Register, a new species of Ceanothus, (*Ceanothus thyrsiflorus*,) "a perfectly hardy shrub [or small tree] with evergreen foliage of a beautiful glossy green, and dense panicles of bright blue flowers," from California. Though hardy in England, it might not be wholly so here. "The plant grows freely in any good soil, and is readily increased by cuttings [under glass ?] of the half ripe wood. Those who are familiar with our common native ceanothus, or *American white fringe tree*, can easily conceive the beauty which a large evergreen species with dense panicles of bright blue flowers would present.

GRAFTING CURRANTS.

The Gardener's Chronicle recommends, for the pretty appearance presented, as well as for improved flavor, to graft currants of different colors, as the red, black, and white, variously intermixed, on stocks trimmed up to a single stem three or four feet high. The tops may be headed down to a dense compact head, or trained as espaliers in the horizontal or fan method, the two latter modes of training, by the free exposure to sun and air, much improving the quality of the fruit. The importance of trimming the bushes up to a single stem to improve the fruit and facilitate clean culture, instead of suffering two hundred and fifty suckers to shoot up all round into a dense brush heap, is very obvious to those who have tried both.

BUDDING ROSES.

A correspondent of the Gardeners' Chronicle is very successful in budding roses, by "leaving a *small piece of wood*, as a protection to the bud when cut from the branch." This prevents drying before adhesion. He finds white worsted the best ligature, and the common Boursault a good stock.

BARREN AND PRODUCTIVE STRAWBERRIES.

The fact that many varieties of the strawberry, without being strictly diœcious, have, from imperfect fructification, distinct barren and productive plants, is more or less understood among cultivators. Some interesting facts, relative to this point, are given by S. S. Jackson of Ohio in a late number of Hovey's Magazine.

He says, "the first that I planted of Hovey's Seedling, I put no male [staminate] plants with them. They grew and blossomed very fine, and I thought I should have some mammoth fruit; but there was not a perfect berry on them, and very few imperfect. The next year I put male plants among them, and they bore beyond my expectation; and I now think Hovey's Seedling is the best market strawberry that we have; but they would not be worth growing here without the male plants among them. Last spring I had about one hundred Hovey's Seedling in a border, without any male plants near them. They flowered as fine as could be wished, but there was only three perfect fruit on them, and those three I impregnated."——"I do not think that an acre of ground, planted with Hovey's Seedling, Keene's Seedling, Hudson, and Elton, without male plants among them, would produce a bushel of fruit. I one year picked *thirty bushels* of the Hudson strawberry from *thirty square rods* of ground; they were about one-tenth male plants."

It is to the general knowledge of this property of the strawberry among the market gardeners of Cincinnati, according to the same writer, that they are there indebted for the perfection, abundance and cheapness of this fruit in the markets of that city. "It is," says he, "a knowledge and practice on this principle, that enables one of our market gardeners to bring *one hundred bushels a day to our market.*"

DEPTH OF SOWING GRASS SEED.

KIND OF PLANT EXPERIMENTED ON.	No. 1, covered ¼ inch deep. Total of each kind.	No. 2, covered 0 to 3 inches deep. 0	¼ inch	½ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.	1¾ inch.	2 inch.	2¼ inch.	2½ inch.	2¾ inch.	3 inch.	Total of each kind.
Lolium perenne, (perennial rye-grass,)	348	29	30	27	19	16	19	14	12	11	9	8	4		198
" *Italicum*, (Italian rye-grass,)	276	24	21	20	13	13	10	11	8	9	6	5	5		145
Dactylus glomerata, (Cock's-foot or Orchard,)	300	30	22	15	15	10	9	7	5	2					115
Festuca elatior, (Larger fescue,)	312	29	24	20	16	13	13	11	9	4	2	1			142
" *pratensis*, (Meadow do.,)	324	28	28	16	12	10	6	9	4	2	2				117
" *heterophyllas*, (Various leaved do.,)	348	31	23	20	18	12	9	6	4	1					124
" *diriuscula*, (Hard do.,)	360	30	23	10	15	10	8	5	3	1					114
Alopecurus pratensis, (Meadow fox-tail,)	192	17	17	16	15	12	7	6	3	1					94
Phleum pratense, (Timothy,)	528	52	39	37	19	16	15	7	5						190
Poa nemoralis, (Wood meadow grass,)	228	24	14	4	1										43
Plantago lanceolata (rib grass or plantain do.,)	252	22	25	19	17	14	11	10	8	6	2				134
Trifolium pratense, (Red Clover,)	192	17	16	14	11	11	8	4	4						85
" *repens*, (White Clover,)	144	13	11	6	4	3	1								38
Medicago lupulina, (Yellow Clover,)	96	12	10	8	6	4	2								42
	3,900	358	303	241	181	144	118	90	65	37	21	14	9		1581

THE above table, showing the results of an experiment given in the Journal of Agriculture, for the purpose of proving the best depth for burying the different kinds of grass seed, cannot fail to be interesting and valuable to our farmers. It was performed as follows:—Two boxes, each one foot wide, and five feet ten inches long, were filled with soil; No. 1, to within a quarter of an inch of the top; No. 2, to the top on one side, regularly sloping to within three inches of the top on the other side. Both boxes were then divided across by slips of wood a foot long and two inches broad, so as to leave fourteen spaces 1 foot long in each box. Fig. 16 will show these divisions, box No. 2 being filled to the top on the side A, and three inches from the top on the side B. The same weight of seed was sown in each box, the slips of wood were removed, and the boxes filled to the top with soil. The seed in box No. 1, would thus be all buried a quarter of an inch deep; and in No. 2 from no depth to three inches. They were placed in a green-house, for the first ten days, to prevent the risk of heavy rains, which would have crusted the surface. This may have caused the seeds to spring from a greater depth than under other circumstances.

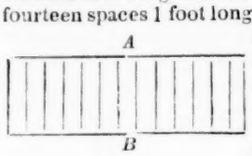


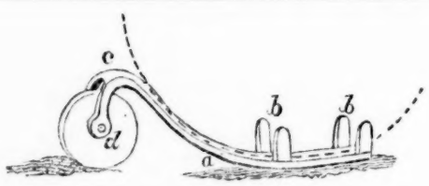
Fig. 16.

The quantities of each sown, (except Timothy, which was about double the rest,) were such as would have produced about the same number of plants to an equal surface, but the experiment being performed in summer, (Aug. 1,) the different kinds had variously diminished in vegetative powers. This diminution with clover is such, that the experimenter, S. D. Stirling, remarks, that clover seed "kept over one summer, would be dear at half price."

The whole furnishes a striking exhibition of the loss sustained in all cases by harrowing grass seed deeply into the ground. This is especially the case with very small seeds, as Timothy and Wood grass, none of the latter vegetating an inch beneath the surface, though this remark would more strongly apply to a heavy than to a light soil.

The writer also makes the excellent recommendation to "all who would avoid disappointment, to prove *all* their grass, clover, and turnep seeds before sowing, by sowing a small weight in a pot, and placing it in a warm situation, and counting the plants which come up," by which they will often find that 30 pounds in some cases will be cheaper than 20 pounds in others.

The scientific names of the plants are given to prevent mistake where different common names are known in different districts, and which have enabled us to add or substitute some common names in place of those which are nearly unknown to our farmers.



WELSH WHEEL-DRAG—(Fig. 17.)

THIS drag is described in the Journal of Agriculture; and from its convenience, simplicity, and ingenuity, is worthy of the attention of our farmers and mechanics. It consists of a sole or shoe, *a*. with two pairs of ears, or projections, *b. b.* to hold the wheel to its place while resting upon the shoe. The neck *c*. is forked at its extremity for receiving the small roller or wheel *d*. which is about nine inches in diameter. The curvature of the neck and shoe is such as to fit the outside of the wagon wheel, represented by the dotted line.

The peculiar convenience of this drag is, that it requires no chain to attach it to the forward part of the wagon, forming a distinct and independent carriage of itself. For the neck *c*. rising a foot above ground, prevents the wheel of the wagon running over it, the moment the wagon wheel begins to mount, its weight is thrown on the small wheel which then immediately rolls forward. The wagon wheel is thus partly supported by the small wheel and partly upon the shoe *a.*; and the drag cannot escape from it, being held by the ears *b. b.* When not in use, it may be thrown into the wagon.

The wheels cast at our furnaces for plow-wheels would doubtless answer for the wheel of the drag.

FEEDING BOXES FOR COWS—(Fig. 18.)

THE annexed figure represents a cheap and good feeding box for cows, which has been found very convenient in foddering them with hay, or other winter food. It is six or seven feet square; the height is about two feet and nine inches, for cows of common size—it must not be too high for them to reach easily over the side, and not so low that they can jump into it. The depth of the *box* is about fifteen inches. There are 2 cross pieces only, morticed into the posts, to stiffen the whole and to support the bottom boards. Four cows will eat from it at once; and it will be impossible for them to tread the hay under feet and waste it. A common work man will make one in two or three hours.

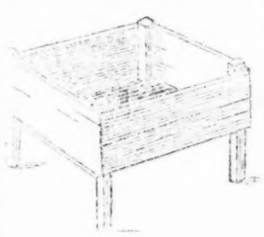


Fig. 18.

ROOT SLICERS—(Fig. 19.)

PERSONS owning large farms, and having many cattle to feed with roots, will doubtless find it cheapest to have good root-slicing machines, costing from ten to twenty dollars. But for farming on a more moderate scale, the owners will find them by no means necessary. Fig. 19 represents a tool, not costing more than a dollar, which by a single stroke on a turnep or potatoe, will chop into four pieces; and if the roots are placed in a square plank trough or box, rapid strokes with this tool will cut nearly as fast as some of the most costly machines. In the absence of this, a well ground spade, or what is better, a steel shovel, will cut rapidly. We find that horses generally prefer to gnaw down ruta bagas uncut, and cows seem to care very little about having their food thus previously carved up. At all events, therefore, don't be in too great a hurry to buy a slicing machine at fifteen or twenty dollars—try a subsoil plow first, at any rate.

Fig. 19.

SCAB IN SHEEP.

THE scab in sheep, the mange in cattle, horses, dogs, &c., and the itch in man, are well ascertained to be caused by parasitic insects, (though of a different class from lice or ticks,) belonging to the *Acari* or mite tribe—exceedingly minute in size, and living in the skin of the animals with which they are brought in contact. The origin and economy of this class of insects have attracted from naturalists considerable attention. That their origin is sometimes spontaneous, owing to the neglect or mismanagement of the animal, is known; yet when once brought into existence, they have the same difference of sex, and in their propagation are governed by the same laws, as animals of the higher orders. In relation to the mysterious but interesting question as to how these animals first have existence, Mr. Youatt eloquently observes:

"Physiologists are fast acknowledging the work of a mysterious but noble principle—the springing up of life under new forms, when the component principles of previous beings are decaying, or have seemingly perished. Thus if we macerate any vegetable substance, the fluid will teem with myriads of living beings, called into existence by the process we are conducting; or rather by that power of nature, or that principle bestowed by the Author of Nature, that life, ceasing in one form, shall spring up in others, and this while the creation lasts! Thus we have probably the hydatid in the brain of the sheep, and the fluke in its liver—parasitical beings which we recognize in no other form and in no other place. *They were the product of the diseased part.* In like manner, the acarus of the scab may be called into existence by the derangements which our neglect, or unavoidable accident, or disease, may have made in the skin of the sheep; and having sprung into life within the pores of the skin, obeys the laws of all living beings as to its after existence and multiplication."

Walz, a German veterinarian, made some curious experiments with the acari. He found if some of the females are placed on the wool of a sound sheep, they quickly travel to the root of it, and bury themselves in the skin, a minute red point, scarcely visible, distinguishing the place where they penetrated. The tenth or twelfth day afterwards, a slight swelling may be discovered, the skin changes its color, and has a greenish blue tint. The pustule forms rapidly, and about the sixteenth day breaks—the mothers again appearing, with their little ones attached to their feet, and covered by a portion of the egg from which they have just escaped. The little ones immediately penetrate the neighboring skin, find their proper nourishment, grow and propagate, till the poor animal, under the torment occasioned by the myriads which prey on him, rapidly sinks down, and at last dies.

Walz also placed some of the *male* acari on the sound skin of a sheep. They burrowed into the skin, and in due time the pustule arose; but all indications of the scab soon disappeared with the employment of any remedy. He therefore concluded that the disease can be communicated from sheep to sheep only by means of the contact of the sound animals with the diseased, or, as they lie near others, impregnated acari traveling from the infected to the sound sheep. The itching which diseased animals suffer, induces them to rub themselves much against posts, or any projecting substances, and these rubbing places become undoubtedly fruitful sources of infection.

We here give cuts of the acari, as delineated by Walz, highly magnified.

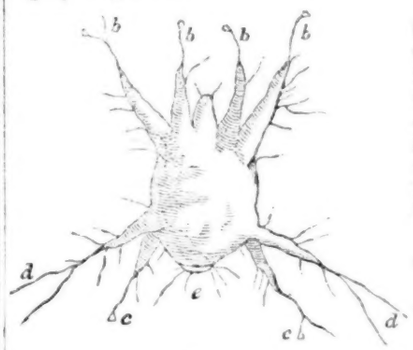


Fig. 20.

Fig. 20.—The female, of 366 times the natural size, larger than the male, of an oval form, & provided with eight feet, four before, and four behind.

a.—The sucker.

b. b. b. b.—The 4 anterior feet, with their trumpet like appendices.

c. c.—The two interior hind feet.

d. d.—The two outward feet, the extremities of which are provided with some long hairs, and on other parts of the legs are shorter hairs. To these hairs the young ones adhere when they first escape from the pustule.

e.—The tail, containing the anus and vulva, garnished by some short hairs.

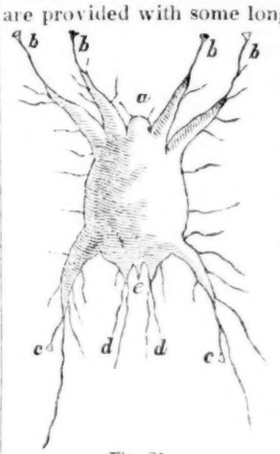


Fig. 21.

Fig. 21—The male on its back, and seen by the same magnifying power.

a.—The sucker.

b. b. b. b.—The fore-legs with their trumpet-like appendices, as seen in the female.

c. c.—The two hind legs, with the same appendices and hairs.

d.—The rudiments of the abdominal feet. *e.*—The tail.

From what has been said it must be obvious that the cure of scab lies in the destruction of this insect. Washes of tobacco, hellebore, &c., are sometimes used, but as the insect lies within the skin, we can never be certain of reaching it with these remedies. They may sometimes prove successful, but in general they only mitigate the disease, which, though it may be thus kept for some time in a latent state, will at length break out to the disappointment and vexation of the shepherd.

A safer method is the application of some substance that will be sure to poison the acari. An ointment compounded according to the following recipe, has proved in our own practice, entirely efficacious.

Let one pound of pure quicksilver, Venice turpentine, and common oil, of each half a pound, and four pounds of hog's lard, be triturated in a mortar till the quicksilver is thoroughly incorporated with the various ingredients.

In using so strong a preparation of mercury, care should be taken that the sheep are properly protected from bad weather. It was in the depth of winter, and in a very cold climate, that we had occasion to use this ointment. Not being at that time acquainted with scab, the sheep became very seriously affected before the disease was identified. Some of the flock lost nearly all their wool, and their bodies, nearly covered with ulcers, presented a most disagreeable appearance. They were put into a barn, kept comfortably warm, and not allowed to go out, except for a short time in the middle of the pleasantest days. In using the ointment, a lump half the size of a hen's egg was used to each sheep, and particu

lar pains were taken to rub it well into the large veins about the neck. It was also rubbed along the back, and in the worst cases in lines down the sides. Every sheep was saved, and in three weeks all were well; while some of our neighbors, who, from fear of the effects of mercury, trusted to other applications, lost many; and after having kept the disease lingering among their sheep for more than a year, killed them and burnt up the carcases to stop the infection.

NEW-YORK STATE AGRICULTURAL SOCIETY.

THE annual meeting of this Society was held at the old State Hall in this city, on Wednesday, the 15th of January. The meeting was well attended—a general and spirited interest was manifested in the affairs of the Society, and all its business was transacted with promptness and unanimity. The President, Hon. J. P. BEEKMAN, was in the chair. Reports were made by the Corresponding and Recording Secretaries, Treasurer, and several Committees. From the report of the Treasurer, it appears that the receipts of the Society during the last year, were as follows:

Interest on stock, - - - - - - -	$210,00
Donation from John Greig, - - -	50,00
" " Geo. Vail, - - -	25,00
" " Robert Donaldson, -	12,00
" " J. P. Beekman, - -	50,00
" " J. McD. McIntyre,	20,00
" " Joel Rathbone, - -	25,00
" " Wm. H. Seward, -	50,00
Receipts at Fair, - - - - - - -	3,723,80
Appropriation from the State, - -	700.00
	$4,865,80

Payments.

Premiums, - - - - - - - - -	$1,600,50
Balance due former Treasurer, - -	114,23
Recording Secretary, - - - - -	550,00
Expenses at Fair, - - - - - -	300,00
Subscription to Colman's European Agriculture, - - - - - - -	100,00
Design for Diploma, - - - - -	50,00
Binding, - - - - - - - - -	328,00
Printing and advertising, - - - -	409,34
Incidental, - - - - - - - -	481,84
	$3,933,91

On motion of H. S. RANDALL, a vote of thanks was tendered to the Corresponding and Recording Secretaries and Treasurer, for the valuable services they have, in their several capacities, rendered the Society.

Hon. JOHN GREIG, Chairman of the Committee to whom was referred the subject of the introduction of books of agriculture into primary schools and school libraries, made a highly interesting and elaborate report, which was received with evident approbation.

On motion of Hon. Mr. DENNISTON, a Committee of three from each Senatorial District, was appointed by the chair to make a nomination of officers for the ensuing year, and to recommend a place for holding the next fair.

Several reports on various grain crops, roots, &c., were made to the Society, of which, not having room for them in detail, we give the following abstract:

WHEAT.—First premium to Matth. Watson, Canandaigua, he having raised 215 bushels of wheat on 4 acres, 12 poles of ground, or nearly 52½ bushels per acre.

CORN.—The first premium on corn was not awarded. The committee award the second premium on corn to J. F. Osborn, Port Byron, Cayuga county, his crop being 213 bushels and three-eighths of a bushel, on two acres of land.

Several other applications for wheat and corn crops, were rejected from defects in the returns.

BARLEY.—First premium to Stephen B. Dudley, of East Bloomfield, Ontario county, his crop, being 69 bushels per acre, on a lot of two acres. The second premium to Wm. Wright, of Vernon, Oneida county, his crop being 50 bushels and 47 lbs. per acre, on a lot of two acres. The third premium to Nathaniel Wright of the same place, his crop being 47 bushels 25 lbs. per acre, on two acres of ground. Bani Bradley stated that he had raised 55 bushels 3 lbs. to the acre. The rule of the Society requiring two acres, this crop was excluded, there being only one acre and two roods. Some other crops were not entitled to premium from defects in the returns.

OATS.—The first premium to Seth Lawton of Washington, Dutchess county, his crop being 120¼ bushels per acre. The second premium to J. F. Osborn, of Port Byron, Cayuga county, his crop being 104 bushels per acre, on a lot of two acres and nine rods. Several statements were necessarily rejected from the imperfections of the returns. There are no competitors for the premiums on rye, peas, and corn sown broadcast.

BUTTER.—Only two applications were made for premiums under this head. The committee award to Geo. Vail, Esq. of Troy, a silver medal. Mr. Vail's cows were Durhams. Six of them, kept on grass feed only, produced in thirty days, 262 lbs. 9 oz. of butter, averaging for each cow, 43 lbs. 12 oz. The milk of one of these cows was kept by itself for thirty days, and yielded in that time 52 lbs. 9 oz. of butter.

CLOVER SEED.—A volume of the Transactions for 1844, was awarded to Henry Brown, of Enfield. Ten bushels of seed, weighing 60 lbs. per bushel, one bushel and eleven pounds weighing 52 lbs. per bushel, and half a bushel of tailings, weighing 38 lbs. per bushel, were produced on three acres and ten rods of ground.

RUTA BAGA.—First premium to John G. Smedberg, of Greene Co., having raised 1160 bushels on one acre, and 2173 bushels on two acres.

H. S. Randall, of Cortland, the second premium, his crop being 820 bushels per acre.

C. B. Meek, of Ontario Co., the third premium, his crop being 724 bushels per acre.

CARROTS.—First premium to Wm. Risley, of Chatauque, his crop being 1059 bushels per acre. One applicant only.

MANGELWURTZEL.—First premium to C. B. Meek, his crop being 1101 bushels per acre. One applicant only.

SUGAR BEETS.—To J. F. Osborn, of Cayuga Co., the third premium, his crop being 657 bushels per acre. One applicant only.

No application was made for the premium on potatoes or cabbages.

The Committee appointed to nominate officers, reported the following list, which was unanimously adopted

B. P. Johnson, of Oneida, President.
James Lennox, of New-York, Vice-President
Thomas L. Davies, of Dutchess, V. P.
E. P. Prentice, of Albany, V. P.
H. W. Doolittle, of Herkimer, V. P.
Benjamin Enos, of Madison, V. P.
O. C. Crocker, of Broome, V. P.
Henry S. Randall, of Cortland, V. P.
George W. Patterson, of Chatauque, V. P.
Daniel Lee, of Erie, Corresponding Secretary.
Luther Tucker, of Albany, Rec. Sec.
Thomas Hillhouse, of Albany, Treasurer.

Additional Members.—T. S. Faxon, of Utica; E. Kirby, of Brownville; Alex Walsh, of Lansingburgh; Geo. Vail, of Troy; J. M. D. M'Intyre, of Albany.

The Committee also reported in favor of Utica, as the place for holding the next fair.

In the evening, the Society met in the Assembly room of the Capitol, to hear the address of President BEEKMAN. This was a valuable production, evincing sound judgment and practical observation. Its leading objects were, a description of the past operations of the Society, and its influence in improving the condition of agriculture, embracing also some excellent observations on the advantages of a proper course of agricultural education.

On motion of Judge JONES, a vote of thanks was tendered by the Society to Dr. BEEKMAN, for the able manner in which he has discharged the duties of presiding officer, and requesting for publication a copy of his addrees.

On retiring from the chair, Dr. BEEKMAN introduced the President elect, Mr. JOHNSON, who, on taking his seat, addressed the Society in a neat and appropriate speech.

On motion of Gen. VIELE, of Troy, it was

Resolved, That a Committee be appointed to prepare a memorial to the Legislature at its present session, for the renewal of the act to promote Agriculture, passed in 1841.

The Committee to whom was referred the consideration of claims for premiums on Essays and Text-book, have not yet reported on that subject, but are expected to submit their report at the next meeting of the Executive Committee, which will be on the 13th of February next.

EXECUTIVE COMMITTEE.

The new board of officers met at the Society's room, Jan. 16, the President in the chair. Present, Messrs. Prentice, Walsh, Kirby, Randall, McIntyre, Faxon, Vail, Lee, Enos, and Tucker.

On motion of Major Kirby,

Resolved, That the next annual Cattle Show and Fair be held at Utica, on the 16th, 17th, and 18th days of September next.

On motion of Mr. Tucker,

Resolved, That a committee be appointed to make arrangements for a series of weekly agricultural meetings, to be held in the Assembly Chamber, and also to take such measures as may be deemed necessary in relation to the room assigned to the Society by the State authorities. The committee appointed, consists of Messrs. Johnson, Beekman, and Tucker.

After considerable progress in making out the Premium List, it was referred to a committee, consisting of the President, Messrs. Lee, Prentice, McIntyre, Hillhouse, and Tucker, to report at the next meeting of the board.

The regular meetings of the Executive Committee will be held at the Society's Room in the old State Hall, on the *second Thursday* of each month.

SOCIAL AGRICULTURAL MEETINGS.

The social meetings of farmers, Members of the Legislature, and others interested in Agriculture, which took place in this city last winter, and in which so much interest was manifested, have been resumed. A meeting was held at the Old State Hall, on Thursday evening, Jan. 16th, at which the President elect of the State Agricultural Society, B. P. JOHNSON, presided, and an organization was effected for the future. This organization is as follows: Hon. J. P. BEEKMAN, (ex-president of the State Ag. Society,) President—ROBERT DENNISTON, E. P. PRENTICE, and EDWARD S. SALISBURY, Vice-Presidents—D. LEE, SANFORD HOWARD, and E. MACK, committee to prepare subjects for discussion. The Editors of the Cultivator were appointed to act as Secretaries.

At this meeting Dr. LEE made some interesting remarks on the necessity of, and the advantages which would be derived from, a system of thorough scientific and practical education, applicable to the profession of agriculture.

At the close of Dr. Lee's remarks, a desultory discussion was carried on for the remainder of the evening, in which Judge Leland of Steuben county, Major Kirby of Brownville, Messrs. McVane of the Assembly, Stuart of Rochester, Howard of Albany, Comstock of Rome, and the President, took part. Many useful facts were elicited, and the meeting was in all respects highly satisfactory to those present. We took some notes of the remarks made, but are obliged for the present, to postpone their publication.

These meetings will be continued every Thursday evening, during the session of the Legislature, and will in future be held in the ASSEMBLY ROOM of the Capitol.

PREMIUM SHEEP BARN.

WE are requested by Mr. L. A. Morrell to offer a premium of ten dollars, for the best plan of a *sheep barn*, adapted to feeding within doors, with drawings of the racks, yards attached, &c., with plans of deposit for roots, grain, &c., the quantity of hay it will hold, and a particular explanation of the whole, and the number of sheep it will accommodate; to be forwarded to him, addressed to Lake Ridge, Tompkins Co., N. Y. The award will be made by the President of the N. Y. State Ag. Society, and two members of the Executive Committee.

We are further requested to say that his object in this is, to insert the same in the work he is now preparing for publication on Sheep Husbandry, which he hopes to have in readiness for the printer by about the first of May ensuing.

FIRE BLIGHT IN PEAR TREES.

AN extended and elaborate paper on this subject, read before the Indiana Horticultural Society, by the author, HENRY W. BEECHER, appears in a late number of Hovey's Magazine. After many accurate observations, the writer comes to the conclusion, that whatever may be the cause of *fire-blight* in New-England, which he does not deny may be caused by an insect, the great blight the past season in the Western States was produced by the weather and season. The high source whence this paper originates, entitles it to great respect, and from the importance of the subject, a particular notice is demanded.

According to the theory laid down, the blight is produced by a warm, moist autumn, inducing late and succulent growth, followed by early and cold winter weather. Thus from a state of rapid growth, with unripe wood, the trees are at once forced as by a shock, to a sudden state of rest; the fluids are frozen, the tender vessels are burst or lacerated, and a succession of warm suns and severe nights, augments the disaster. After speaking of the effects of this freezing,—lacerated passages,—thickened and diseased sap,—torpidity of parts,—and obstruction of circulation,—he remarks, "At length, the spring approaches. In early pruning the cultivator will find in those trees, which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow color. These will be the first signs, and the practiced eye will detect these long before a leaf is put forth." He further adds, "the leaf puts out, and no outward signs of disease appear nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months the blight is fully developed. When the descending fluid reaches the point where, the previous fall, a total obstruction had taken place, (from causes already mentioned,) it is as effectually stopped as if the branch were girdled. For the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good and the vitality of the tree unimpaired; but when the sap and vessels are both diseased, the sun affects the branch on the tree, just as it would if severed and lying on the ground. There will therefore be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points the current downwards is wholly stopped. Only the *outward* part, however is dead; while the *alburnum* or sap wood is but partially injured. Through the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch seemingly dead in the middle, growing thrifty at its extremity." Thus the growth may in some cases continue late in summer.

In other cases, where the downward flow of the sap, is only partially, and not wholly obstructed, the downward current takes with it this thickened, diseased, and poisonous sap, and spreads the contagion gradually downwards.

Many interesting facts are adduced in support of this theory, some of which may be briefly mentioned. The two great blight years in the Western States, 1832 and 1844, were preceded by just such weather as has been spoken of; and a skillful cultivator predicted six months previously by an examination of the trees, not only the extent of the disaster, but what particular trees and what individual branches would first perish. In one case given, out of 200 trees, only *four* escaped. These four had been *transplanted*, had grown but little during summer and fall, and consequently the wood was well hardened. But another collection of trees, also transplanted, though growing but little in summer, made a vigorous growth

in fall, and suffered severely from blight. In these cases names and dates are given. Another case was that of Mr. White, a nurseryman near Mooresville, Morgan County, Ia., in an orchard of from 150 to 200 trees, who had not a single case of the blight in the year 1844; although all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week than nursery soils in this county; and in the summer of 1843 his trees grew through the summer,—wound up and shed their leaves in the fall, and during the warm spell made no *second growth.*"

In another place, he says, "Sometimes the bark bursts, the sap exudes, and runs down, turning black; and its acridity will destroy vegetation, on which it may drop; and shoots at a distance from the trunk, upon which the rain washes this ichor, will soon perish." This must be a case of unusual virulence, as we have never witnessed it.

The author of the paper points out the distinction between blight, and mere *winter killing* which destroys the tree at once.

He recommends, to prevent the evil, to select warm, dry soils, so as to ensure early, well ripened growth; to select such varieties as ripen their wood early; and to prevent late growth where necessary by *root pruning.* When blight has actually taken place, excision is recommended as a matter of course.

This theory, which accords with the views we have favorably regarded and frequently expressed for the last ten years, so far as most of the cases in Western New York are concerned, is supported by too many facts to be easily overthrown. In case of *apricot* trees, we have often noticed the dried and dead portions, caused evidently by severe weather on that tender tree, and the subsequent heat of the sun, while the branches above were in a state of rapid growth. But this rapid growth soon needed a larger supply of sap than the drying stem below could furnish, and sudden withering and death followed. We have also witnessed cases of the *poisoning* quality of such diseased sap, in the *peach* tree: For the sake of experiment, some buds were started after being set in summer, and made a very succulent, unripened growth of several inches. Next spring they commenced growing, but soon died suddenly, evidently from the effect of the winter on the tender and unripened wood, and the branch itself not only died, but the poison ran down to the very roots, which in every case of this experiment turned brown to their extremeties, showing the circulation of the poisonous fermented sap. The *Madeleine pear,* which is remarkably thrifty in its growth, as well as succulent in its texture, is peculiarly liable to blight, nearly all the cases which have occurred under our own immediate notice, being on this variety; while after the most rigid examinations we have never found the insect. The *Seckel,* a very hardy slow-growing variety, is rarely if ever affected. We have often seen discolored, diseased, or dead strips on the branches extending gradually downwards, until large portions of the tree were dead. Hence the importance of cutting off the affected limbs without a moment's delay, and also some distance below any indications of disease,—as the poison may have passed downwards, and not as yet produced any visible effect. With this care, we have never known the remedy to fail, if vigorously applied.

Against this theory, the following facts are stated by P. Barry in the last number of the N. G. Farmer. "In the Mt. Hope Nurseries, there are several thousand pear trees of various ages, from 1 to 8 years old, and highly susceptible of blight from this new cause, yet there has never appeared the slightest indication of it, while the disease has been committing serious depredations in the immediate vicinity on large trees, much less likely to suffer, because less excited to growth by high cultivation. We have seen many trees killed by this disease, that had not grown a foot in two or three years." Perhaps the cases of early and late ripening already given, may throw some light on this subject. Good, healthy, and vigorous trees, in the well cultivated nursery, may mature their wood early; others, though growing more slowly, may not as in case of the transplanted trees, which commenced growing in autumn. But it must be remembered that *blight* is *death;* girdle a limb, and it will wither and turn black, just as in fire-blight; and no one theory, nor no two, may explain truly all the cases or classes of cases which occur. In the nursery of the writer, the tops of several thrifty young pear trees, in a low, warm place, were observed to be dying last summer when in leaf; what the result would have been is unknown, as they were all immedietely cut off and burned, and the disaster no more appeared. Why the blight should in some cases destroy the whole tree; in others only a branch and proceed no further, may be hard to explain; but may possibly depend on different degrees of virulence of the poisoned sap, or various states of hardiness and vigor, on peculiarities of soil, or of seasons, or on all these more or less combined. Killing the tops of young peach trees by cold, does not usually destroy the whole tree, but this is sometimes done, as in the budded trees before mentioned. Further and accurate observations are needed.

SENECA CO. AG. SOCIETY.

We are indebted to John Delafield, Esq'r, of Geneva, for a copy of his address before this Society. It is a spirited and interesting production, containing many valuable historical remarks, as well as agricultural facts. He informs us that in 1780, the soil of Seneca county, was first trodden by the white man! That fifty years ago, the county contained only *seventy-five* inhabitants, exclusive of the red-men—and that probably at that time, not more than twenty acres of land were cultivated. "What a contrast," he remarks, "with the present day! Then, a sun-beam scarce broke the forest's gloom, nor did a Woodman's axe disturb the awful solitude of nature. What a contrast with the present hour and place! The land now pouring forth its wealth to bless and reward the farmer's toil—children and children's children, as the polished corners of the temple, gladdening his heart and leading him with happiness, and gratitude in every heart, toward the end of his most useful and virtuous life."

In relation to the errors of cultivation, Mr. D. remarks—

"We divide our labor over too many acres to afford sufficient culture to each—and we neglect the aid of science, which teaches us to concentrate the varied means always within our control, and their economical and appropriate application. This will perhaps be admitted, when we notice the small average produce of wheat per acre, of any section of our country, and compare it, with the products of wheat readily obtained from well cultivated fields."

The benefits of agricultural papers, in giving to farmers the results of each others' experience, are thus strikingly shown:—"The agricultural periodicals of this country, bring to the fire side, and leisure hour of every farmer, the tried results of experiments throughout the world—they give to him the practice of every section of our country—they open to him the science of his profession—making clear and intelligible all that heretofore has been deemed chance."

Mr. Lawrence's Address, before the Yates County Agricultural Society. The main object of this address, appears to be to induce farmers to qualify themselves for taking that share in the direction of political affairs, which, from their numbers and the proportion they contribute for the support of goverment, justly belongs to them. We give an extract:

"The time has arrived when farmers as a class should understand their true position, and should arise in their might to vindicate the dignity of their profession. We often hear farmers complaining that their class is not fairly represented in our national councils, and these complaints are often well founded, and who are to blame but themselves, for it is through their ignorance and apathy that they are made the tools and dupes of demagogues and politicians."

Erratum.—On the second column of page 327 of last year's volume, for "Musk," read *Musch,* the name of the city from which this variety of the Apricot was called.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VII.

Lab. of Ag. Chemistry Association, Edinburgh, Nov. 28, 1844.

LUTHER TUCKER, Esq.— In my last letter I gave a report of Prof. JOHNSTON'S Lectures in Ayr; I will now notice some of the farms in that region, which struck me as worthy of attention. The country in the immediate vicinity of Ayr, is generally cultivated with much skill, and some portions of it would compare even with the Lothians.

For several days I was at the place of Mr. CAMPBELL of Craigie, who is proprietor of a considerable estate, about half a mile from the town, and who, by influence and example, has greatly contributed to the advanced condition of agriculture in his district. His farm is in fine order, and there are numerous experiments in progress. In one field the effect of guano upon the second year's grass, was very striking; not only was it more luxuriant than parts of the field where other manures had been applied, but sweeter, for the cattle evidently preferred it, and kept it eaten close to the ground.

The farm of Mr. JOHN TENNANT is considered one of the best in the neighborhood of Ayr. It is about three miles from the town, and comprises 600 acres. Nearly the whole is laid out in 40 acre fields. This gives the farm a beautiful appearance, besides saving a vast amount of labor both in working of the land and in making and repairing fences. Mr. Tennant has drained every field, and in answer to a question of mine respecting a certain kind of land, supposing it *undrained*, he said, that of undrained land, he could tell me nothing; with him draining was an indispensable preliminary to improvement. He has a fine dairy of 90 Ayrshire cows, considering them the best breed for milk. He has a cross with the Durhams, but it is only for fattening. The grain crops were all in the stack yard, but there were about 20 acres of turneps in one field that would average 30 tons to the acre. They were raised with guano and various other portable manures, in most instances combined with farm-yard dung. This is far the best method of applying these manures, as it has been found to unite economy with actual increase of effect.

About six miles from Ayr, I visited the farm of Mr. BURNETT of Gadgirth. It lies high, and is surrounded by a rather bleak unproductive tract upon which the crops looked sickly and the herbage of the pasture lands miserably scanty, except in the hollows of the ridges, where was a considerable crop of rushes. A few years since Mr. Burnett's land was in the same condition. By the judicious application of modern science and practical skill, within five years he has doubled its value, and made a farm that for neatness and evidence of improvement can scarcely be surpassed. The crops remaining in the ground were quite heavy, especially the turneps. In one of the fields is a kiln, where lime is burned for the farm, and in another a tile work, for the manufacture of draining tiles, which can easily supply the neighboring proprietors when they are prepared to follow Mr. Burnett's excellent example. He has made 200 miles of drains on his own farm, having laid 150,000 tiles in a single season. The stock as usual, in that district, is Ayrshire, and the dairy is a model of good order and neatness. At the time of my visit, the operation of clearing away a portion of the original Caledonian forests was going on, and the ground preparing for cultivation. Instead of putting in the plow at once, and running about among the stumps, as I fear most of our farmers would have done, every root even, was dug out as the work proceeded. The whole soil was thoroughly broken up and turned over by the spade to the depth of two feet, and drains put in 6 inches lower. This field at once, therefore, will be in a fit state for perfect cultivation, and will immediately bear remunerating crops. On this farm is also a coal mine worked at the depth of 200 feet, which yields coal of excellent quality. With his own lime kiln, tile works and coal mine, Mr. Burnett is in an extraordinary degree independent of foreign aid, and a look at his farm, would, I think, convince the most sceptical, that *book farming* may with advantage be combined with practical wisdom.

On visiting the fine farm of Mr. ALEXANDER of Southbarr, near Paisley, my attention was chiefly directed to the difficulty he has encountered in drainage. The subsoil, to an extraordinary degree, abounds in iron, so much so that it actually in some instances has choked the tiles. He has however, contrived in the worst places, to obviate this by occasionally letting in a powerful stream of water at the upper part of the drain which sweeps it clear. The sides and bottom of the open drains are thickly incrusted with iron. It is certain that the drains will in a few years diminish its quantity, but at present it is a most serious evil. Mr. Alexander pointed out to me a cross between a Southdown buck and Cheviot ewes, which he admires much, and intends raising extensively. This gentleman has another farm at Muirkirk, in one of the wildest parts of Lanarkshire, where he has made great and admirable improvements. At some future time I hope to visit it.

The last estate which I visited was that of Mr. FLEMING of Barochan, also near Paisley. Here I was much interested by the improvements which have been made on a portion of a large peat moss or bog, 150 acres in extent. The limits of my present letter forbid my giving an account of the excellent and economical method pursued; suffice it to say, that where peat was once 20 feet in thickness, are now firm beautiful fields, producing very heavy crops, in one instance nearly 80 bushels of oats to the acre. The whole moss will in a few years be converted into a fertile farm. Mr. Fleming has a very considerable knowledge of chemistry, and hence the numerous and varied experiments conducted under his superintendence, have been of great practical value. Many of the most remarkable results are to be found in the appendix to Prof. Johnston's Lectures on Agricultural Chemistry and Geology.

Were it not that I fear trespassing on the patience of your readers, my remarks upon these model farms, as they may justly be termed, might extend to a much greater length. In the hope that even these imperfect sketches may give an idea of some features of improved Scottish husbandry, I am, very truly yours,

JOHN P. NORTON.

LETTERS FROM MR. MITCHELL—No. II.

Liverpool, England, Dec. 3, 1844.

LUTHER TUCKER, Esq.—I walked out yesterday to have a look at the Liverpool cattle market, held every Monday about three miles from town, on the road to West Derby, where lie the seats of the Earls Sefton and Derby, which at some future time I will take occasion to describe to you. I noticed in the streets the first ice of the season; the air was fine, cool and bracing early, but clouded as usual, and was dull before I reached the ground. I met upon my way numbers of butchers returning to town with their purchases, or driving them to their fields, of which I spoke in my last. The market is situated immediately by the side of the great "London Road," upon level paved ground, containing pens for about 3,000 cattle, and 7,000 to 8,000 sheep. The beef cattle were mostly from 3 to 5 years old, bullocks and heifers, varying very much in color, form and weight. The average weight of a 3 year old bullock, I should judge to be 6 to 700 lbs. dressed (in New England way, with hide and tallow.) The best of the cattle were from Ireland; and nine-tenths of all there, were either from Scotland or Ireland. I noticed many of the Galloway polled cattle. The Herefords and Durhams are not known in this market, and none stand so high as the Scotch and Irish black cattle. I observed to a drover that the Herefords were perhaps the first in the Smithfield market. "Ah, sir," said he, "we wish the flesh that's on light bone, and care nothing for the breed."

"And pray, sir, what may such heifers be worth?" said I, pointing to a pair of smooth, black polled Scotch animals just then driven out. "Sure, sir, and nothing short of £27 ($120) could buy them." They would dress perhaps 680 to 700 lbs. each. Difference in "feel" made great difference in sale of cattle of apparently

equal weights. The price of those sold under my observation, would range, I should think, at from 36 to 50*s*. a cwt. ($7 to $9.50.) There were no poor cattle, and few very fat ones; indeed it is not the season for fat beef yet. On the conclusion of a bargain for any particular drove, the cattle were driven into the road, where they were taken in charge by boys and dogs—admirably trained (the dogs I mean) for the purpose, selecting, by direction of the owner, an individual from a herd of cattle, and keeping a single one or more to the beaten track. They sell readily at from £2 to £10.

The sheep are wholly Scotch and Irish. The Scotch, small; most of them a black-faced, shaggy, long wooled animal, selling from 15*s*. to 25*s*. ($3 to $5.) The large Irish sheep—elegant mutton they were too, as our dinner to-day testifies—sold for 20*s*. to 36*s*. The Southdowns are not appreciated in this market. There were on the ground about 2,000 cattle and 7 to 8,000 sheep. A large part is bought by butchers, in small droves, from Birmingham and Manchester, this being the great receiving port of cattle from every part of Ireland. Still there are large butchers here who never attend the market, supplying themselves by regular engagements with their own drovers. No veal and but few milch cows come to this market. A good new milch cow sells at from 14 to £20. Veal is plenty in the town market at about 7*d*. the pound. Some I noticed beautifully dressed, a day or two since, weighing some 45 lbs. to the quarter. But I must leave the town markets, their number, their size, their display, their throngs, &c., for another letter.

Notwithstanding the increased importation of live stock from Ireland, not only to Liverpool, but also through Bristol to London, there have been, beside shipments of salted beef this year, thus far, to amount of 3,000 tierces and 600 barrels to this port, and 5,000 tierces and 282 brls. to London; beside 13,000 tierces and 20,000 brls. of pork to London, and as much more here. No wonder England cherishes her close relationship with Ireland! Who can sneer at her bogs and fens, with such evidence of her agricultural products?

The market prices for the past week, which it may perhaps interest you to know, have been: For potatoes (of which considerable quantities are being shipped,) 2*s*. 6*d*. to 4*s*. 6*d*. a cwt. Beef, 2*s*. 4*d*. to 3*s*. 6*d*. per 8 lbs. Pork, 2*s*. 10*d*. to 4*s*. Mutton, 2*s*. 8*d*. to 3*s*. 8*d*. Hay, coarse meadow, 3*l*. 15*s*. to 4*l*. 16*s*; fine upland, 5*l*. 5*s*. to 5*l*. 10*s*.

Hay has been imported in one or two instances from America, but for some reason, has not done well. The duty is 16*s*. per load. I will give you in my next a full schedule of duties and port charges on all American agricultural products.

Apples have of late come in, in considerable quantities—selling with duties paid (6*d*. per bush.) at from 12*s*. to 22*s*. per brl. All depends upon the packing. A brand known to open well, will fetch from 3 to 5 shillings more than a new brand. Some are packed in sawdust, some in straw. Fuller details on this subject in future. Salted beef has sold the past week, American mess, from 1*l*. 3*s*. to 1*l*. 18*s*. per brl. Pork, mess, 2*l*. 4*s*. to 2*l*. 10. Lard, American, sells quick at 1*l*. 15*s*. to 2*l*. 1*s*.

Imports of flour past week, from America, 3,515 brls.

You may expect in future a running comment on the weekly markets, so far as they relate to American produce. Also any thing that may come in my way of interest to an American farmer.

I will endeavor to send you by next steamer a sketch of an English farm house and out-buildings, to afford some presentment to the eye of the *air* of a British farmer's home. I send with this some letters of Mr. Mechi, and drawings of his buildings, on which he has expended great sums. He is a practical man, and I think you will find matter of much interest in the letters.

I should not omit to mention that the potatoe crop here, as well as with us, has been latterly subject to disease, called the "dry rot," attributable by many to the heating of potatoes in the heap, but vulgarly, and I think erroneously, attributed to the use of guano.

Respectfully yours,

D. G. MITCHELL.

LETTER FROM MR. HORSFORD—No. I.

By the last arrival from Havre, we received the following letter from our friend Prof. HORSFORD, whose departure for the University of Giessen, we noticed in our November number. Though dated at London, the letter was finished at Giessen, where Mr. H. arrived on the 25th Nov.

London, Nov. 13, 1844.

MR. L. TUCKER—The Packet Ship Switzerland reached the Bill of Portland, Wednesday evening, the 6th inst. after an unusually long eastward passage of twenty seven days. The gale, which proved so destructive to vessels in the British Channel, and along the coast, came upon us, the Saturday and Sunday previous; but having abundant sea-room and a staunch ship, it was the occasion only of a fine display of seamanship among the officers and crew.

The passengers were landed in a pilot boat at Weymouth, one of the favorite watering places of the nobility; and early the succeeding morning we were greeted with English scenery and English life. I shall attempt no expression of the feelings with which I looked upon every thing, so unlike what I had been accustomed to; for I should fail, as others have, in writing what I have read—to give a just idea fully appreciable by an American, and besides, at the best, it would be a more than thrice told tale. Every thing seems constructed with the motto "to last;" every thing seems so old and established; and every body seems so happy and contented, that one from the young, enterprising, progressing, anxious New World, feels bewildered in the contemplation of objects about him.

The "Bill" of Portland is a promontory of rock jutting two or three miles, I should judge, into the channel. It is so called from its resemblance to the bill of a duck, when seen from some distance at sea. Weymouth rests upon the outcrop of rocks which underlie the chalk basin; and the inhabitants have taken advantage of their location to erect a great number of fine blocks of buildings overlooking the bay and harbor. In front of some of these edifices are garden and court-yard walls of irregularly shaped sandstone blocks, to which a very fine effect is imparted by laying them up in a striped mortar; or perhaps I should say grooved mortar. After looking some time at the structure, I came to the conclusion that in the creation of the wall, two pots of mortar were employed, one of which was readily decomposable, or suffered ready disintegration from atmospheric exposure, while the other did not. Between each two layers of stone there were three layers of mortar, the middle one of them being of the first kind. Upon this supposition I could see, how in the progress of a few months after the erection of the wall, the fine grooved effect might have been produced.

From Weymouth we proceeded by "The Magnet," an English coach, over the undulations of the chalk basin to Salisbury, five and forty miles. The road was of flint and graded with such care, that the gallop or trot of the horses was uninterrupted through each stage. As we drove from Weymouth, there was nothing in English agriculture or husbandry of any description particularly commending itself to my attention. The soil upon the chalk was so shallow, as long since to have been quite exhausted. Extensive grass plains, mottled here and there with patches of furze, and flocks of South Downs, were frequently in view.

No fences, and very indifferent hedges, except in the immediate vicinity of villages, were seen, separating larger or smaller tracts of land. Somewhere on our way we passed the county line of Wilkshire, altogether unique in character—a ridge of earth succeeded by a ditch. The height of the ridge must originally have been some twelve or fifteen feet.

In the vicinity of this ridge, and scattered all along the road from Weymouth to Salisbury, and abounding especially in the vicinity of Stone Henge, are circular mounds and amphitheatres like those attributed to an unknown race, before the Indians, in America. I learned one fact here, which, taken in connection with the correspondence form, may serve to aid antiquarian investigations. It is, that the same kind of flint arrow-heads or arrow-points

—alike in form and material, are found in these mounds that are found in Western New-York. Now there have, as yet, no chalk beds been discovered in the United States, and of course, no flints. Indeed, there have to my knowledge, none been discovered in North America. This being true, and the arrow-points being composed of a material found abundantly in England, where, also, similar arrow-points obviously wrought from the chalk cliffs near, are also found, it furnishes an interesting fact for the antiquarian, one that without much effort of credulity, would induce the conjecture that these two systems of mounds and two suits of arrow-heads had a common origin.

The plowing was all along very beautiful, the "lands" having been laid out with such mathematical exactness, and the furrows cut of such uniform width; at the distance of the coach, however, the plows seemed less skillfully constructed than some I had seen. The holding of a plow was shared between a pair of wheels, and a holder proper—while the driving of three horses or one horse and a pair of oxen, was entrusted to two other persons; in some instances to but one. Sowing by drills had given to the newly sprouting grain, the finest effect. The crops of turneps were tolerably good in some instances, but very rarely abundant. I was told in view of this fact, and some others of the same description, that our tour lay through a very indifferent specimen of English agriculture. This I found emphatically true, as we approached London, where the surrounding country is on the Surrey side, for a distance of some twenty miles, a vast, magnificent garden.

The effects of landscape gardening were illustrated in two or three instances on our way, which were exceedingly beautiful. Plats of larch and fir, the one now brilliant yellow, and the other bright green, cover a hill side here, while at the conclusion of a lawn, there are tall, slender oaks of uniform height, and equal intervals between, encased to the branches with ivy; and here again are mounds of shrubbery of every kind of branch and foliage, so disposed as to fill the eye, when viewed from the mansion at the foot of the valley yonder, while, there again, is a lone evergreen spreading its limbs in freedom on every side.

Salisbury Plain, is a series of broad mounds and gently sloping vales, as much like the surface of country between Albany and Schenectady, as any I have seen, if those sand plains were freed of their shrubbery. It is a great grass field, with here and there scanty remains of hedges. It appears to me a region, the soil of which is no longer productive, and which is therefore occupied only by shepherds and their flocks. Some account of Stone Henge, that most wonderful Druidical relic, and the conclusion of my journey to London, will constitute the introduction to my next letter.

Respectfully yours,
E. N. Horsford.

Foot Rot.—C. W. S. in the English Agricultural Gazette, directs that the hoof be cut away sufficiently at the lower part to permit the escape of any matter that may be confined, and that the diseased part be touched, by means of a feather, with a little hydrocloric acid, which may be repeated if any fungous flesh grows on the part; if otherwise, the sore may be dressed daily with a powder composed of equal parts of sulphate of copper, alum, fine charcoal, and Armenian bole. The sheep must be kept in a clean dry place—dirt and moisture are prejudicial.

To Sweeten Rancid Butter.—A foreigner, says an agriculturist in the neighborhood of Brussels, has succeeded in removing the bad smell and disagreeable taste of rancid butter, by mixing and beating with it chloride of lime. The operation is said to consist in beating the butter with a sufficient quantity of water, into which is put 25 to 30 drops of chloride to 2 pounds of butter. After being mixed till all parts are in contact with the water, it is left for an hour or two, then withdrawn and washed anew in fresh water.

☞ Putting hot water, say a couple of gallons, into a churn, and shaking it about a while before using it, will, it is said, make the butter "come" in a short time.

VERMIN IN ANIMALS.

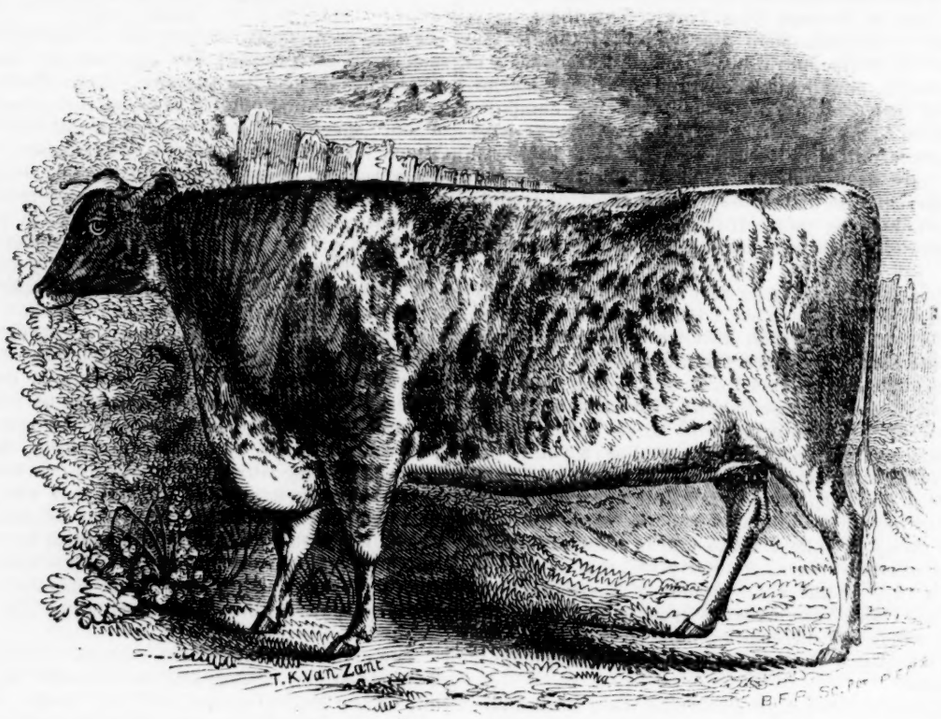
From man, down to the inferior tribes of animals, such as bees, grasshoppers and beetles, almost every species has its peculiar parasite. Each kind of domestic animals, including poultry of all sorts, is attacked by one or more species. We have heard it said that lice on cattle and ticks on sheep, "*don't do much hurt*," and from the myriads of those insects which are permitted to live, we might suppose some such idea was quite common. How many lice or ticks it takes to consume an ounce of blood in a given time, we don't know that any body has ever ascertained; but that they do actually support themselves from the bodies of the animals to which they are attached, is certain. Their beaks or suckers are almost always inserted in the skin, and their bodies are filled nearly to bursting with animal juices. By their attacks, the vermin keep the animals in a state of constant fretfulness and irritation; the consequence of all which, is, the stock become poor and weak. In endeavoring to relieve themselves, by biting and rubbing, from the intolerable itching which ticks occasion, we have frequently known sheep to pull out and and lose nearly all their wool, and lice induce cattle to rub off much of their hair. Exposed to storms and inclement weather, in this naked and feeble condition, both cattle and sheep often contract diseases which carry them off—the owner, perhaps, satisfying himself by attributing the loss to *bad luck*.

The application of various substances will kill vermin Tobacco-water, strong soap-suds, spirits of turpentine, oil, or any kind of grease, will kill them if brought in contact with their bodies. Preparations of mercury, (such as unguentum,) by affecting the blood and being thus carried through all parts of the system, are more effective; but their use is not unattended with danger. Salivation is sometimes produced, and if the animal while under its operation is exposed to cold and wet, its death is frequently the consequence. Sulphur also operates through the blood, and is a useful and perhaps harmless application. Strong decoctions of tobacco are sometimes injurious by making the animals sick and weak for a time.

In the winter season, when the animals are clothed with a full coat of hair or wool, the entire destruction of vermin is attended with some difficulty. If cattle are kept under cover, or are *fully protected* in bad weather, we see no objections to a moderate use of unguentum. We have often used it under such circumstances, with perfect safety. For stock that are kept out of doors, or are much exposed, we should prefer whale oil mixed with spirits of turpentine.

The best mode of killing sheep ticks, when the wool is long, is by fumugation with tobacco. Take a cannister, of copper or sheet iron, made at one end to fit the nose of a bellows, and having at the other end a small pipe for the escape of the smoke. Fill the cannister with tobacco, put in a coal of fire, and fasten the cannister to the bellows-pipe, around which there should be wrapped some damp tow, to make it fit tight, and commence operations. It takes two men, or a man and a boy, to work to good advantage—one to hold the sheep and open the wool, and the other to blow in the smoke with the bellows. The wool should be opened in lines or furrows around the body from six to eight inches apart. As the wool is opened the pipe of the cannister should be applied close to the skin, the wool immediately closed around, and slightly compressed at the surface with the hands, and at the same time a puff given with the bellows. This will keep the smoke close to the animal's body. The work may be done very expeditiously, and nearly every tick will be killed.

This is the best course when sheep get over-run with ticks in the winter season ; but if the *lambs* are properly attended to, after the sheep are sheared, no necessity for smoking will ever occur. Three or four days after shearing, the ticks being deprived of protection on the sheep, resort to the lambs, whose wool is then generally started enough to give the vermin sufficient covering. If, at this time, the lambs are dipped in a decoction of tobacco, the ticks may be exterminated at once. The decoction need not be so strong as to hurt the lambs.



IMPROVED SHORT HORNED DURHAM HEIFER ESTERVILLE.—(Fig. 16.)

ESTERVILLE, the property of E. P. Prentice of Mount Hope, received the first prize for two year old heifers at the Cattle Show of the N. Y. State Ag. Society at Poughkeepsie, 1844. She was sired in England by the Daniel O'Connell, (3557)—dam, Esterville, by Sir Alfred, (6469)—g. d. Amethyst, by Prince of Northumberland, (4826)—g. g. d. Amazon, by Crusader, (934)—g. g. g. d. Amazon, by Sultan, (1485)—g. g. g. g. d. Belona, by Mars, (411)—g. g. g. g. g. d. Rolla, by North Star, (458) own brother to Comet, sold for £1,000. Sir Alfred was, in 1840, sold to the King of the French.

CHOICE APPLES.

Description of the "Northern Spy" Apple, and a few other choice varieties from Western New-York. By ELLWANGER & BARRY.

No. 1. NORTHERN SPY.—This fruit is above the medium size, fair specimens measuring over 3¼ inches in diameter. *Form* somewhat conical, regular and slightly ribbed. *Stalk* of medium thickness, ¾ of an inch long, inserted in a large, deep and regular cavity. *Calyx* generally about half closed, deeply set in a large regular basin. *Skin* smooth, shining and thin, of a dark red color with crimson streaks, dotted with pale yellow on the sunny side—pale green, changing to a rich yellow when ripe, in the shade—those that are fully exposed to the sun with a good aspect, are completely covered with a beautiful deep pink, with purple streaks and minute yellowish specks. *Flesh* yellowish white, breaking and tender, very juicy and fine flavored, with just enough acidity to suit almost any taste. It possesses a strong and agreeable perfume, quite peculiar to it; by placing your head over an open barrel of the fruit, you can at once distinguish them, in the dark, from any other. It is fit for use from December till June. We sent a few of them to the Massachusetts Horticultural Society on the 23d of May last as sound and as perfect in beauty and flavor as it was possible for them to be: in this respect, they fully equal, if not surpass, any apple we know of. The tree is of rapid, upright and beautiful growth, and attains a large size. The young wood is of a reddish brown color, quite glossy, and covered with whitish dots. Young trees bear immense crops, and moderate ones, alternately; as they advance in age, they become more regular.

We are of the opinion, and so are all who are familiar with the fruit, that it is one of the most valuable kinds we possess, either of native or foreign origin. Its superior qualities as a table fruit, together with the great length of time that it is in use, render it peculiarly desirable for limited orchards and fruit gardens; and it cannot be too highly recommended to persons embarking in the culture of fruit for distant or foreign markets; some 10 or 12 barrels have been brought into our market the past fall, and were promptly sold at $2.25 per barrel, while ordinary kinds were selling for $1. In the spring they sell readily for $1.50 per bushel, even in our abundant market.

The history of this fruit, as far as known, is this: The orchard in which the original tree stood, (it is now dead) the property of the late Oliver Chapin of Bloomfield, was planted, as we are informed, when the country was first settled, over 40 years ago; the trees were all seedlings, and when they came into a bearing state, those that were bad were grafted; those considered good were left in their natural state. This variety was of the latter class. Some 14 years ago, a person came into the neighborhood who practiced grafting in the spring, around the country. He, in the course of his researches, discovered the good qualities of this fruit, and gave it the name it now bears; perceiving that the old tree was in a decaying condition, he dug up a number of suckers that had grown up around it, and sold them to a few persons in the vicinity. One man who raises fruit for market, purchased some of them, and they bore for the first time, three years ago, a quantity of magnificent apples, which he carried to market, and thus the fruit was introduced to notice. We have taken particular pains to examine personally, all the particulars, and we are fully satisfied of its being a seedling variety. We have noticed suckers growing up around the young trees we have alluded to, and the appearance of the wood, in every point, is identical with the tree.

No. 2. NORTON'S MELON APPLE.—This is an apple entirely new to us; and which, we strongly suspect, is a "native;" we found it in the same neighborhood where the "Spy" originated. We have been informed that it has been cultivated in that vicinity for a great number of years, but we could not trace out its origin satisfactori-

ly. It is a great bearer, and is esteemed in Bloomfield, one of the best table apples they have for fall and winter use; to our taste it is a *first rate* fruit, and eminently worthy of cultivation. It is commonly called the "Melon Apple," from its excessive juiciness; we have added "Norton's" to designate it more particularly, having received it from a gentleman of that name. It is about medium size. *Form* inclining to conical, slightly ribbed. *Stem* one-half to three-quarters of an inch in length in a pretty deep hollow. *Calyx* usually closed and set in a smooth regular basin of considerable depth. *Skin* smooth and glossy, and exceedingly thin, of a light red color, with stripes and blotches of crimson next the sun, and of a pale delicate flesh color in the shade. *Flesh* white as snow, tender, breaking, fine flavored and sprightly; juice very abundant, as much so as in a luscious peach. In use from November to April.

No. 3. Detroit Apple—*(Black Apple.)*—This fruit is partially known and cultivated in several sections of the country; we do not recollect having seen a description of it particularly, or any account of its origin. It is supposed by some to have been introduced to the neighborhood of Detroit by the French, and thence distributed to other places. We have had many inquiries made recently, respecting it, and are therfore induced to give the following description from samples now before us, grown here.

Fruit rather above medium size, three to three and a half inches in diameter. *Form* round, very regular and flattened. *Stalk* three-quarters of an inch long in a deep cavity. *Calyx* closed, and set in a hollow of moderate depth, and considerably wrinkled. *Skin* rather thick, smooth and shining, of bright scarlet, changing to dark purple, marbled and dotted with yellow in the sun—dull red, with an occasional blotch of green in the shade. *Flesh* white, crisp, very juicy, agreeable flavor and perfume; those that are exposed to the full glare of the sun, are tinged inside with red almost to the core. This apple is highly prized with us. It is as yet, however, very scarce, and seldom seen in market. But we have reason to believe it will soon be widely disseminated as it deserves to be. It is in use from Nov. till March. There is an apple cultivated in this vicinity called the "Jersey Blue," very much resembling the "Detroit;" and we recollect having seen one quite similar, exhibited by the Messrs. Downing in 1842, at Albany, called "Grand Sachem."

No. 4. Blush Apple.—This apple we recently found in Ontario county, where it is held in the highest estimation. We can say nothing with regard to its origin. It is not known by any one we have seen, how it came into the neighborhood; at any rate, it is but very little known or cultivated, and is certainly of superior excellence. It is of large size, and when fully ripe, resembling considerably in form and appearance, the "Sweet Bough." *Stem* very thick, fleshy and short, set in a somewhat irregular cavity of moderate depth. *Calyx* quite open, in a smooth regular basin of considerable depth. *Skin* smooth and glossy, of a beautiful blush in the sunny side; green, changing to yellow, when ripe in the shade. *Flesh* greenish white, tender, breaking, juicy and pleasantly acid. Fit for use from October till March.

No. 5. Wax Apple.—This apple is cultivated by Judge Strong of Rochester. He does not know where it came from; and his family, who prize it very highly as a dessert fruit, on account of its fine keeping qualities and beauty, have given it the name of "Wax Apple," from its clear, delicate, waxlike appearance. *Size* medium. *Form* oblong. *Stalk* one-half to three-quarters of an inch long, inserted in a minute hollow, nearly even with the surface of the fruit. *Calyx* closed, quite prominent, even with the surface. *Skin* smooth and glossy, bright red, with small yellow dots, on the sunny side; parting abruptly from a pale yellow on the shaded side, similar to the Lady Apple. *Flesh* white, juicy, and of agreeable flavor; keeps till June; retains its beauty and flavor admirably.

King Apple.—One of your correspondents inquires where grafts of this apple can be obtained; we would state for his information, that they can be had in Rochester; we have a large number of the trees in our nursery, propagated from fine bearing trees of Wm. Pitkin, Esq., who cultivates this fruit extensively. He thinks it unsurpassed. He sent all his crop of the past year to New-York city, we believe. It is thus described in the "New Genesee Farmer," vol. 3, page 57. "*Fruit* large or middle sized, roundish or conical, inclining to flat. *Eye* small, closed in a narrow, shallow basin. *Stalk* an inch long, set rather deep, in a wide cavity. *Skin* a light yellow on the shaded side, streaked or blotched with red next the sun, and where much exposed, passing into a full red, sparsely marked with brown dots near the stalk, but more thickly dotted near the eye. *Flesh* whitish yellow, sub-acid, but more sweet than tart; of a fine flavor."

Mount Hope Garden and Nursery, Rochester, Dec. 1844.

MANAGEMENT OF BREEDING EWES AND LAMBS.

Mr. Tucker—Your private request that I should give you my experience in the management of breeding ewes, has been some time delayed. A full account would require too long a chapter for your paper. The accompanying notes are hastily and briefly given.

The nature and combinations of the various points and parts of the ram, should of course be well considered, and impressed on the mind of the breeder, in order that he may always rear and preserve those animals to the greatest advantage, paying the strictest attention to build and constitution, and to the preservation of the quantity and quality of the fleece.

It is very hard to find and retain all of the following qualities in one ram, or a stock of sheep, viz: Round build, wide chest, large belly, round and full behind, wide tail near the body, large but short legs, long body, short back, large but short neck; wool fine, very thick, and very long and oily; wool thick on the belly; the inner part of the legs mostly covered, and run quite even from the shoulder to the ham, free from jarr or long coarse hairs, of good length and thickness on the outer part of the fore and hind legs down to the knees and gambrel joints; short head, but wide between the eyes, which should be full and bright. In my judgment, a stock getter of this description is worth his weight in silver to any breeder that keeps one hundred ewes.

There is a great difference in the disposition of the merino race. Some of them are naturally more tame and docile than others. It is quite important to obtain a stock getter of a gentle and quiet disposition. An improved disposition indicates an aptitude to convert their food into flesh or fat. A good disposition is very meritorious in the breeding of ewes as well as wethers; those most gentle are in the best state at lambing time. There are several circumstances which are supposed to form or contribute to this goodness of disposition in these animals. They must be well bred, or come from such as have good properties; breeding in-and-in, or in the same line, greatly contributes to form disposition. Ewes should be carefully selected before put to breeding. Choose such as are the most perfect, and that possess in the highest degree those properties or qualities which are wanted. If the ewes produce wool of a short staple, breed from a buck of a different character. A judicious selection as regards build, should also be attended to at the time they are turned to the ram, if it has not been done before.

Ewes of good age, and the best milkers, should be selected first for the ram, leaving the younger ones to be placed with him about ten days later. Sixty ewes are enough for a young ram, and 150 to 200 may be put to an older one. It is best to throw out the ewes as fast as they are tupped. The ram should be grained some time previous and during service. Early lambing is mostly advantageous where the circumstances of the farm will admit of it. In Vermont, the month of May is considered the best month for the lambs to drop. Ewes should have the wool well clipped away from the udders previous to the dropping of the lambs, and they will rear their lambs better to shear them as early in June as practicable, according to the weather. It has a tendency to dry up the milk, carrying their fleeces into the hot days. Ewes should not be allowed to range in long pastures while the

lambs are young; forty at this season is as many as should be kept together, and if the flock is less, it would be better for various reasons. Ewes should be examined early in the morning, and see that the lambs just dropped, are capable of sucking, which is commonly readily decided by the distention of the belly. When the lamb becomes chilled, it may be resuscitated by placing it in warm water, and next, rub it with cloths till dry; give him no milk until he calls for it, and then he may have all that nature requires without injury; milk from a farrow cow is not suitable to feed young lambs. Ewes may give too little milk, especially when they drop their lambs early in the spring. In such cases, it well pays to aid the lambs by milk fed from a bottle a few days. Their milk may be greatly increased by feeding them turneps, potatoes or similar green food. Given to those that drop their lambs early, the growth of the lambs is greatly promoted, which is of much future importance, for when they are stunted at this early period of their existence, they never turn out so well afterward. With the root crops may be fed preserved after-grass or rowen; oats, corn or oil meal may be made use of for the winter food of breeding ewes. Red and white clover are of much consequence as spring food for breeding ewes; no sort of pinching sheep stock answers any good purpose; food in abundance should always be provided, and good water should constantly be at hand. Those ewes that first take the ram, it is profitable to mark off, that they may be early selected and extra care taken with the early lambs.

Merino ewes in good order are apt to give a plenty of milk, and will take care of their lambs. In case she does not own her lambs, shut her into a small pen, and make her stand to suckle the lamb a few times, which will generally bring her to natural affection. Some recommend tying up the ewe and let a dog bark at them, which frightens them into obedience and affection for their offspring.

It sometimes happens that ewes with an abundance of milk lose their lambs. It may be profitable to provide her with another that does not fare as well; to effect this, place the skin from the dead lamb over the body of the live one, and the unfortunate mother will own it. The skin need not remain on more than a day or two.

As soon as a lamb becomes smart, his tail should be taken off; the best way is to turn the animal on his back and hold his hind legs. The operator takes hold of the tail with the left hand, but is cautious not to pull it. Then place the knife across the tail about one inch from the body, near the intersection of the two cords with the tail; then with the edge of the knife, shove up the skin about one-third of an inch; when the edge strikes between the joint, immediately cut it off. By this process, the skin will project beyond the bone, and of course heal much sooner. By cutting off the tail as the lamb stands on his feet, the wool prevents the cutting readily, and by pulling the tail as is usual, it leaves the bone to project beyond the skin, and thus prevents the healing some days. The ewe lambs should be cut shorter than the wethers.

In respect to the business of castrating or gelding the lambs, it should be performed early, as there is less danger of too much inflammation taking place. The pouch should be taken off pretty close to the body, and when the operation is attended to early, there is no need of any application to the wound.

The lambs should be immersed in a decoction of tobacco water, say five pounds of good tobacco steeped in a sufficient quantity to dip one hundred. This should be attended to about one week after the ewes are clipped, to destroy all the ticks which have by this time found shelter in the lamb's fleece.

Three months and a half or four months is as long as is profitable for the lamb to draw milk from the ewe. Turn them into fresh and sweet feed reserved for the purpose, either pasture or meadow, at a distance from the ewes, out of hearing; if possible, there should be no water in the lot, as they may over satiate and injure themselves. In order that the young stock suffer no check, they should have good feed and a plenty of it. The milk should be drawn from the ewes within four or five days after weaning, to prevent any bad consequence by the udder swelling

The best way to get a smart and even lot of lambs is to put out the buck *only in the day time* with the ewes. I sometimes put out the bucks two or three hours each day with the flock, stabling them the remaining part of the time.

The method of turning a number of rams into one flock is highly exceptionable, as tending to prevent the main object and injure both sexes.

Sheep are very sympathetic animals, and have more to do in making their progeny than any other species. Therefore to insure the lamb to be struck off after the fashion of the sire, he should be placed with them in the day time only.

By placing ewes in full vigor with rams deficient in constitution, you will produce more females than males. To effect the contrary, let your rams be of full age, and robust, placed with old or young ewes that are not in full maturity, and bucks will be multiplied more than ewes.

Merino ewes should not be allowed to breed until the third year. Their time of gestation is about five months, and are able to produce three births within two years. Those that are backward in taking the ram, the best means to be employed, are those of good stimulating keep.

Covered sheep folds are often of very great advantage in securing and protecting both ewes and their lambs. Lambs should by no means be winter stocked with the ewes; being weaker, they cannot have an equal chance at the food.

In order to guard against the injury of the sheep fly, which is more troublesome to breeding ewes, many breeders in this vicinity, make use of Scotch snuff, thrown up the nose by a common syringe; a pound of snuff is mixed with eight quarts of water; one-half gill is sufficient for each nostril. It requires two hands to operate expeditiously. The head of the sheep partly enters a frame constructed for that purpose, and secured fast to receive the injection. The time selected for this operation, is the fall season. Those sheep that are affected with the grub in the head, occasioned by this fly, may be sought out during the winter and spring months. They exhibit a general stupidity and dullness; stand rather drooping. The viscid matter that flows from the nose is sometimes of a bloody color. Good keeping during the summer months is the greatest preventive for this and most diseases that trouble the sheep family.

Respectfully yours, S. W. JEWETT.

Weybridge, Vt., Dec. 7, 1844.

ROT IN THE POTATOE.

I read in your December number, page 371, with much interest, the letter of Prof. JACKSON on the disease in the potatoe. It is of much importance that all the facts in relation to the subject should be correctly stated; I therefore trouble you with this note, to correct one error in the Professor's letter. He says—"No balls are formed on any of the diseased plants." This is undoubtedly true of those that he examined, but on my plants many *were* formed.

I do not think that the disease is attributable to the honey dew exclusively, because we have those dews very frequently, but they have never affected potatoe vines before. Perhaps some disease existing in the growing potatoes *predisposed* them to be affected by the honey dew.

There are two facts which I observed in my field, which I have not seen noticed in your paper. The first is, that the disease was confined to the tubers nearest to the surface; those lying deep were unaffected. The second is, that the rotten potatoes were full of long white worms. I saw nothing which looked like fungi, with the naked eye, but it did not occur to me to examine them with a microscope. The odor was intolerably fœtid.

N. N. D.

Land being capable of greater cultivation, and great quantities lying entirely uncultivated, the idea of abundancy of labor is erroneous.

The most profitable farming is the highest and best farming.

FOOD OF PLANTS—SALT FOR POTATOES.

	WHEAT. 25 bu. per acre.			BARLEY. 40 bu. per acre.			OATS. 70 bu. per. acre.			RYE. 25 bu. per acre.			PEAS. 32 bu. per acre.			POTATOES. 332 bu. per acre.		
	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Roots.	Tops.	Total.
Potash, ...	3.3	0.6	3.9	5.6	4.5	10.1	3.7	32.7	36.4	8.0	1.3	14.3	16.2	12.2	28.4	80.5	327.3	407.8
Soda, ...	3.5	0.9	4.4	5.8	1.1	6.9	3.3		3.3		5.0		14.7		14.7	46.6	0.3	46.9
Lime, ...	1.5	7 2	8.7	2.1	12.9	15.0	2.5	5.7	8.2	1.8	7.3	9.1	1.2	163.2	164.4	6.6	517.0	523.6
Magnesia, ...	1.5	1.0	2.5	3.6	1.8	5.4	1.7	0.8	2.5	0.7	0.5	1.2	2.7	20.2	22.9	6.5	70.0	76.5
Alumina, ...	0.4	2.7	3.1	0.5	3.4	3.9	0.3	0.2	0.5	0.4	1.0	2.0	0.4	3.6	4.0	1.0	0.2	1.2
Ox. of iron,.					0.3	0.3	1.0		1.0	0.6			0.2	1.2	1.4	0.6	0.8	1.4
Ox. manga..					0.5	0.5				0.5		0.5		0.5	0.5			
Silicia, ...	6.0	86.0	92.0	23.6	90.0	113.6	50.0	172.0	222.0	2.5	92.0	94.5	8.2	60.0	68.2	1.7	196.0	197.7
Sulph. acid,.	0.8	1.0	1.8	1.2	2.8	4.0	0.9	3.0	3.9	0.4	7.0	7.4	1.0	20.2	21.2	10.8	16.8	27.6
Phos. acid,..	0.6	5.0	5.6	4.2	3.7	7.9	1.5	0.5	2.0	0.7	2.0	2.7	3.8	14.2	18.0	8.0	78.3	86.3
Chlorine, ...	0.2	0.9	1.1	0.4	1.5	1.9	0.2	0.2	0.4	0.1	0.7	0.8	0.8	0.3	1.1	3.2	2.0	5.2

L. TUCKER, Esq.—Above is a table, by which you may at a glance, ascertain what materials are requisite for the production of such crops as are generally cultivated in this region of country. It is condensed mostly from "Prof. Johnston's Agricultural Lectures." His Analysis gives the contents in a hundred or thousand parts; but in order to make it more convenient for reference, I have collected the facts into one table, and adapted them, according to his estimates, to a single acre, giving the amount of each requisite material in pounds and its decimal parts.

It will be seen by the above that the grain crops require but a small quantity of material for perfecting them, beside the vegetable matter with which the soil should abound, which is doubtless the only permanent source from whence plants derive their carbon—the most, indeed the whole of this material may be found in four substances, very common, and within the reach of every one, namely: ashes, salt, lime and plaster.

I will mention one experiment with salt, which it will be seen by reference to the above, is very essential to the growth of the potatoe. Three years ago I had a field in excellent heart, planted with potatoes, which gave an excellent crop, averaging three hundred bushels per acre. The next year it happened that it became necessary to plant the same field again with potatoes; but I feared lest the worms should destroy the crop, as they appeared quite numerous at the first digging; but I proposed to remedy this by sowing salt, which I did about a fortnight before planting, at the rate of a barrel per acre. The salt I supposed would kill the worms, nor did I calculate upon any other effect from it; but it did not kill the vermin, for the ground was as thickly infested by them as in the previous year; and upon digging the potatoes, the crop exceeded my expectations, and to my surprise gave an average of 420 bushels per acre over the field. The potatoe being a very exhausting crop, I did not then know why the second crop should be the largest of the two; but since I have seen an analysis of the potatoe and of salt, the wonder is easily explained, and I am constrained to believe that had I put on, beside the salt, 20 bushels of unleached ashes per acre, the crop would have been increased to 600 bushels per acre.

Salt is not so destructive of vegetation as most people imagine. From some small experiments that I have made, I should judge that it would take sixty bushels per acre, of our common fine salt, before vegetation would be materially injured. In conclusion, allow me to recommend Professor Johnston's Agricultural Lectures to every farmer, as a book particularly interesting to him, and worthy of a place in his library.

P. S. Would the potash in leaves and twigs be available to plants, without their being first burned, and in what time?

As the cause of the potatoe rot has created considerable discussion of late, I will state a fact that may not be altogether unworthy of notice. I had a new variety raised from the potatoe ball, two years ago, that was worse affected than many of the old varieties. Yours, &c.

La Fayette, Onon. Co., Dec. 1844. E. V. W. DOX.

HUSSEY'S REAPING MACHINE.

MR. EDITOR—I believe that if there was a more general correspondence between the farming community through the medium of agricultural journals, and their experience more generally imparted to each other, with regard to seeds, their qualities, varieties, &c., we should be much benefited thereby. There is nothing perhaps, from which greater results would accrue, than a general information as to the constaht improvement in tools and machinery generally applicable to agricultural operations. We here abouts, see in some of the northern papers, about once a year, that they have had a plowing match, and that some maker receives the premium for his plow, possessing many advantages over others. This is generally the last we hear of it.

Of all the agricultural implements which have come under my notice for some years, I think there is none more worthy of special notice than Hussey's Grain Reaping Machine. I have used one for two years, and am satisfied that it is competent to perform what Mr. Hussey sets forth. Since his improvement in adding the fore wheels, it can cut twenty acres of wheat in a day, and the work is perfectly done. Another great recommendation is, that the machine is permanent in all its parts. I have used mine for two years, without having previously prepared the ground by removing stone and other obstacles, and have broken no part, and find nothing giving way. Many of our farmers were prevented last year from procuring machines from Mr. Hussey in consequence of understanding that some of McCormick's would be sent to the county on trial. They were sent, and as readily taken on trial. I did not see them work, but inquired of the gentlemen who used them very particularly as to their operation, feeling interested myself in the result of the trial, and was in every case informed that McCormick's were not comparable with Hussey's. One very serious objection to McCormick's was, that the hand who pushed off the grain, follows the machine on foot; necessarily the machine must go very slow; and then, from the manner in which the grain falls on the platform, it is much tangled when it is pulled off in the sheaf. This objection does not apply to Hussey's; the raker rides on the machine, and can with ease do very good work. I am ignorant whether it has been tried in your fine Genesee country. If not, it should be next harvest, and I think without doubt, it would give general satisfaction.

Respectfully yours, L. W. WASHINGTON.

Halltown, Jefferson Co., Va., Dec. 19, 1844.

A beneficent Providence has so ordered the affairs of this world that we cannot do good to others without directly or indirectly doing good to ourselves.

THE "YELLOWS" IN PEACH TREES.

MR. TUCKER: SIR—About the year 1795, peach trees, in the neighborhood of Philadelphia, began to die without any apparent cause. Soon after, they began to perish in like manner more and more remotely from that city. By 1810, few peach trees were left alive in the State of New-Jersey. They began to die around New-York about 1801, and in the State of Connecticut, about 1815. The unknown cause of this strange death of trees, before considered as hardy as other fruit trees, has been termed the "*Yellows;*" and has been called a *disease*, in analogy to those epidemics which at times lay waste human life. It is, perhaps, the first and only instance of any affection in the *vegetable* kingdom, that can be called with propriety, *disease*. It has all the appearance of being constitutional; bearing no resemblance to the decline and decay caused by bad soil, unsuitable temperature, or local injuries.

Hitherto, all efforts to discover the cause of this fatal malady, have been made without success. What produces the "Yellows," is as much unknown as what produces the cholera. One circumstance has doubtless prevented a very general and thorough search for the cause of the Yellows. Every where we have occasionally seen an insect (*Ægeria excitiosa*) that eats into the bark of peach trees, near the surface of the ground. Whenever a person discovers this insect at work, he imputes the death of his trees to that. Most persons stop here, merely looking about for some mode of keeping out or destroying the peach worm. Now the effects of the Yellows are as different from those of the boring of the peach worm, as the small pox is different from the cut of a knife. If every body could be made aware of this difference, research would be universally awakened, and receive a direction that might lead to the most valuable results. A great step will be gained, if a hundred thousand readers of the "Cultivator" would all understand alike what is meant by the term *Yellows* in peach trees; would all understand distinctly, that it does *not* mean *peach worm*. For this reason I deem it of great importance to present in the Cultivator a clear, unmistakeable description of this fatal disease.

There are two marks or symptoms, by which the presence of the disease is indicated. One is, the shooting out from the body or limbs of the tree of very small, slender shoots, about the size of a hen's quill. The leaves upon these shoots are commonly destitute of green color, as if blanched, or as if grown in a dark cellar; and like the shoots which bear them, are of diminutive growth—rarely exceeding an inch in length. These shoots do not usually start from the common, visible buds at the points where the leaves join the stem, but from unseen latent buds in the bark of the trunk or large branches. The other symptom is, the ripening of the fruit two to four weeks before its natural season of maturity. Most generally also, the fruit, whatever be its natural color, is more or less spotted with purplish red specks. If shoots, such as are above described, appear upon a tree, or without them, if the fruit upon any part of it (not wormy) ripens before the proper time, it may be certainly known that the tree has the Yellows.

These are not the only marks or symptoms of the disease; but they are those which are the most readily discovered. The ordinary leaves of the tree, or at least those upon the diseased portion of it, commonly undergo a slight change of color. Instead of a bright glossy green, they take on a dull yellowish tinge. The wood also, when the disease is considerably advanced, becomes unelastic, so that its branches, when moved by the wind, instead of the graceful waving of health, have a stiff, jerking motion. These two last mentioned symptoms will not readily be seen but by a practiced eye.

What I have further to say concerning this disease, may most conveniently be stated in separate sections.

Sec. 1. The slender shoots spoken of above, do not appear to ripen their wood perfectly. They continue in a great degree herbaceous till frost comes. For this reason, or because no buds are formed on them, they perish the succeeding winter.

Sec. 2. The fruit may exhibit marks of disease, when the other symptom (slender shoots) is not discoverable. But, on the other hand, I have never seen the slender shoots on any part of the tree, without the fruit, if there was any, being affected.

Sec. 3. The fruit, the first season of attack, usually grows to its proper size. The second season, it is uniformly small—not more than a half or a quarter of its proper size.

Sec. 4. Whatever be the natural color of the fruit, red, yellow, white or green, it is more or less, when diseased, colored with purplish red; generally in specks or coarse dots. The flesh, quite to the stone, is often colored, and most deeply around the stone. By the colored specks, a person may easily distinguish by the eye, diseased from healthy fruit, as it is offered in market.

Sec. 5. The taste of diseased fruit cannot be exactly described, for want of appropriate words. The word insipid almost describes it. There is an absence of all agreeable flavor, and there is not much that is disagreeable. A few sorts retain, in spite of disease, some of their exquisite peach flavor.

Sec. 6. In the first summer of disease, it is not always that the whole tree appears affected. The slender shoots may show themselves on one branch only, the rest of the tree having every appearance of health. In like manner, the fruit upon one branch may ripen four weeks too soon, upon another two weeks too soon, and upon the rest of the tree at the natural time. The second season, all the fruit will ripen three or four weeks too soon.

Sec. 7. The tree sometimes dies the next year after the apearance of the disease, and sometimes lingers along with a feeble life for two or three years. Sooner or later however, it is overcome by the disease. I have never known, nor have I heard authentically, of any tree recovering from it.

Sec. 8. Soil, whether of clay or sand, whether moist or dry, whether cultivated or in grass, manured or unmanured, does not appear to me, clearly, either to increase or diminish the liability to disease.

Sec. 9. Trees standing in exposed and sheltered situations, walled and in open ground, on hills and in valleys, seem alike and equally liable to the Yellows.

Sec. 10. Trees standing in places where people are passing to and fro very often near them, though not exempt from the disease, appear less liable to it than others. This is strikingly exemplified in the city of New-Haven, where trees standing close by the sidewalks, outlive all others. The same fact I have observed upon my own premises.

Sec. 11. Luxuriant and vigorous growth is no protection against the disease. Trees have grown 5 feet in the same season when they have shown in the body and fruit the marks of the Yellows. On the contrary, slow growth is *perhaps*, (I cannot speak confidently) favorable to health. On this point I give the following fact. Five years ago this fall, I dug a hole in my meadow, a foot square and 18 inches deep, threw back the earth, and planted a peach stone. It came up next spring, and has grown very slowly. It is now only 45 inches high, but perfectly healthy; while every other tree planted at the same time in my garden, a few rods off, grew vigorously, bore fruit, took the Yellows, and have been dug up.

Sec. 12. When the disease commences in a garden or orchard containing a considerable number of trees, it does not attack all at once. It breaks out in *patches*, which are progressively enlarged, till eventually all the trees become victims to the malady. Thus in an orchard of two and a half acres, all the trees were healthy in 1827. The next year 2 trees on the *west side* of the orchard, within a rod of each other, took the Yellows. In 1829, six trees on the *east side* of the orchard were attacked; five of them standing within a circle of four rods diameter. In 1830, fifteen more were attacked; fourteen of which stood within a circle of four rods diameter. A similar fact is now apparent in my neighborhood. A fine lot of 200 young trees, last year in perfect health, now show disease in two spots, near the opposite ends of the lot, having exactly six diseased trees in each patch, contiguous to each other; while all the other trees are free from any marks of disease.

Sec. 13. Young trees, even in the first summer of their

growth, and before they have blossomed, sometimes take the Yellows. For this reason, many suppose the disease to be hereditary. Upon this point, my observation has not furnished me with facts that seem conclusive. Young trees from a diseased parent do indeed take the Yellows; so do those from a healthy parent; and one, as appears to me, is as liable to do so as the other. At present, it may be best to consider this point not settled.

Sec. 14. Whether the disease is communicated from tree to tree through the medium of the blossoms, as is believed by many, is also an unsettled point. I have not known a case where such a communication of disease was clearly proved. On the contrary, there is some negative evidence that throws a doubt upon the correctness of the supposition. I took a blossom from a diseased tree, and applied the dust (pollen) to the blossom of a young tree in my garden. The tree, thus exposed to infection, showed no mark of disease, either in that or the succeeding year.

Sec. 15. If a bud from a diseased tree is innoculated into a healthy stock, whether peach, apricot or almond, the stock will become diseased and die. As this is a fact of some importance, I will furnish some evidence of it. I took some buds from a tree, having symptoms of the Yellows, and inserted part into peach, part into apricot, and part into almond stocks. Some of the innoculations *took* well, but all showed marks of disease the next season. The peach and almond *stocks*, with their buds, *died* the second winter after innoculation. One apricot stock lived five years, but its peach top grew in that time to be only about 3 feet high. Further proof is furnished by a communication to the "New-York Farmer," some years ago from David Thomas, of Western New-York, I believe Cayuga. "In 1823 I procured," he says, "a box of peach trees from the neighborhood of New-York. I observed *some* of these to be of feeble growth; and fearful of losing kinds so rare and so high priced, I budded some into a *most thrifty stock* in the nursery, and some into *thrifty trees* in my peach orchard. On the young stock, two buds *took*, but never sprouted; and in less than a year it *dwindled like the tree whence the buds were taken, and died. Every tree in my peach orchard so budded, has been long since dead*, and no other peach trees have died in that orchard."

Sec. 16. In an orchard or garden, containing both old and young trees, the young trees will generally be diseased first, the old trees last.

Sec. 17. From the very limited opportunity which I have had, to compare the liability to disease of different varieties of peaches, I incline to the opinion that the Connecticut Red Rareripe and the Early Ann, are the last to take the Yellows. Dr. Monson of this city, thinks a White Cling, of natural growth, "endures the longest of any in a healthy state." With the exception of those three varieties, all, whether old sorts originated in times beyond the memory of man, or new ones sprung the very last year from seed, appear equally susceptible of the disease.

Sec. 18. Peach trees budded on apricots, plums, and sweet almonds, are liable to the Yellows.

Sec. 19. Plum trees are not subject to any disease analogous to the Yellows. But the apricot, *standing in the neighborhood of diseased peach trees*, is subject to a sudden decline, ending in death, which I can trace to no visible cause. The growth of the branches becomes feeble; manuring, digging, pruning, all have no effect upon the vigor of the tree. Nothing will save it. Yet I have not seen upon the apricot, the slender shoots and premature ripening of the fruit, which mark the disease of the peach. Nectarines are subject to the disease, and show it in the same manner as the peach.

Sec. 20. The following fact gives reason to believe that the disease commences in a tree, between the month of September and July following. In the month of September, I took buds from a tree apparently in full health. The buds, inserted into young stocks, grew thriftily and without disease for three years. But the tree, from which they were taken, showed marks of disease in July following the time they were taken.

Sec. 21. There is no connection that I have been able to discover between the *Yellows* and the *curled leaf*, except that the leaves of trees, much diseased by the Yellows, do not curl.

The phenomena attending the development of the Yellows as detailed above, seems to authorize two or three inferences—to be made, however with some distrust. Mrs. Marcet (Conversations on Vegetable Physiology,) thus explains the formation of the green color of leaves. "The direct rays of the sun are necessary to enable plants to decompose carbonic acid. In this process, the oxygen of the carbonic acid is exhaled by the leaves, and the carbon deposited in the plant: now, it is *this deposition which produces their green color*. Mr. Sennebien is of opinion that carbon is not positively black, but of a dark blue color. The cellular tissue of plants is of a yellowish white; consequently, when those minute blue particles are lodged within the yellow cells, the combination of the two colors produces green, in which the blue or yellow tint prevails, in proportion as the carbon or cellular tissue predominates." Assuming this to be correct, and taking into consideration that the slender shoots, which are the marks of disease, grow without forming solid wood, (Sec. 1,) and considering that their leaves are destitute of green color, though exposed to the light, we conclude that they do not *decompose carbonic acid*, as healthy shoots and leaves do—*their particular vital power seems to be prostrated or greatly debilitated*. Then, as to the fruit, according to Lindley, (Theory of Horticulture) the food, upon which fruit subsists and by which it is perfected, requires to be elaborated, first in the leaves, and then in the fruit. As far as I have observed, the *leaves of the terminal branches in the early stages of disease* perform their functions regularly, (Sec. 6.) They have a healthy color, are of natural size, and the branches grow with unimpaired vigor. The fruit also appears to be abundantly supplied with food, (Sec. 3.) Hence it seems probable that it is the elaboration of food *in the diseased fruit*, which is imperfect. Lindley says,—"among the immediate causes of the peculiar changes that occur in the secretions of fruits, are heat and light; without which the *peculiar qualities of fruits are imperfectly formed*." He further says, that fruits owe the production of their sugar, their sweetness, to exposure to bright light, *decomposing their carbonic acid and expelling their oxygen*. Therefore, as the fruit of diseased trees is exposed to the usual light and heat of our climate, and yet has an unnatural *purplish red* color (Sec. 4,) showing that the oxygen is not properly expelled; and forms *very little sugar or flavor*, (Sec. 5,) showing that it *does not decompose carbonic acid*, as it should do; we conclude that the *particular vital power of the fruit*, also, is *prostrated or debilitated*, in the same manner as that of the shoots. What has produced this prostration or debility? For myself I must answer, I do not know. Whatever it be, it seems not to pervade the whole tree at once—to be local in its beginning, and to become general by degrees, (Sec. 6)—and capable of passing *by contact*, perhaps in that way only, (Sec. 14,) from one tree to another, (Sec. 15.) Can it be a poison? So little is known of the action of poisons upon plants, that we can hardly be justified in pronouncing positively this *unknown something* to be poison. But there is some analogy, not very striking however, between the action of this something upon the vital forces of the peach tree, and that of *narcotic* poisons upon the functions of the animal system. On the supposition that it is a poison, whence can it be derived? I think not from the soil, (Sec. 8.) I think not from the atmosphere, (Sec. 12.) This breaking out of the disease in *patches*, seems to negative the idea of an atmospheric origin. I think it is very doubtful whether the disease springs from contagion, disseminated by blossoms, (Sec. 14.) It cannot, I think, be owing to particular sorts of peaches having been propagated for a long period, and beyond their natural term of existence, (Sec. 13 and 17.) It may be remarked that the Early Ann mentioned in Sec. 17, is one of our oldest sorts. I think the disease cannot be ascribed to defective cultivation, to injudicious pruning, or injury to the roots of trees; for there was abundance of such cultivation, pruning and injury to roots, long before the "Yellows" made its appearance. The peach worm, cannot, I think, be charged justly with this mischief; for thousands of trees have had the Yellows,

which were untouched by the peach borer. What then, causes this disease—whence comes this poison, if it be such? On this point I will hazard a *conjecture*, that it is derived *from some unknown insect*. My reasons for this conjecture, I shall give as briefly as possible.

Animal matter, in contact with living portions of plants, causes, under some circumstances, a modification of the vegetable functions. Thus the egg of a small fly (cynips confluentus,) deposited in the leaf of the oak, causes the leaf to grow into the oak apple. In like manner are produced numerous excrescences, such as galls, cedar apples, honeysuckle apples, black knots, &c. There is another effect of the same cause, not producing an excrescence, but hastening the maturity of fruit. Thus the egg of the apple moth and the worm proceeding from it (carpocapsa pomonella,) cause apples and pears to ripen prematurely; and we see the same effect in the cherry and peach, caused by the plum weevil. So, as we are informed, the ripening of figs is hastened by the process of *caprification*; which consists in exposing the young fruit to small insects found in the wild fig. Now in the case of the Yellows, something operates upon the vital functions of the tree, causing latent buds to start and grow, not, it is true, into excrescences, but in an unnatural manner—causing the fruit to ripen 3 or 4 weeks too soon: in this last particular being quite analogous to the effects of worms in apples, pears, peaches and cherries. May it not be inferred that effects so similar, have a similar cause? To this it may be added, that the spreading of the disease, by degrees, from Philadelphia to other parts of the country; its appearing in patches (Sec. 12;) its seizing young and thrifty trees in preference to old and unthrifty ones (Sec. 11 and 16;) the escape from disease of trees standing where persons are constantly passing (Sec. 10;) the appearance of disease first in a part of the tree and then becoming general (Sec. 6;) are circumstances which seem to me to strengthen the suspicion that some *new, unknown, shy* insect has been gradually extending itself from place to place, over the country, and poisoning our peach trees.

Hitherto no means of warding off or curing the Yellows, has come to my knowledge. Most of the applications for the cure of the disease, have been made on the supposition that it was caused by the peach worm. Such are ashes, scalding water, charcoal, lime, salt, saltpetre, fish oil, and urine. All of them have more or less agency in excluding the borer, but are not all *effectual* even for that purpose. Some of them have seemed to promote for a time, the growth of the trees, and to give a deeper green to their leaves; but none, that I have ever observed, have at all checked the progress of the Yellows. I have tried some applications to the *bark* of diseased trees, such as diluted oil of vitriol, aqua fortis, strong ley of potash, and chloride of lime—not much expecting success; for it is probable trees absorb nothing through the bark. But until we know, as we never shall know, all the processes of nature, we cannot be sure beforehand, what is to be the effect of any application to a living plant. Since the discovery of the means of infusing into living wood various substances, calculated to preserve it from decay or to give it desirable colors, by placing solutions of them in contact with the sap vessels, which are cut across, it may lead to a useful discovery, if diseased peach trees should be made to absorb a variety of matters. Some one *may* be found, that will modify or change the diseased action of the tree—decompose the poison, if there be any. It is my intention next summer, to institute a series of experiments upon this plan, if I can find a sufficient number of suitable *subjects* to operate upon. Others perhaps may find it convenient and be disposed to try the same experiments. If they do, it will be gratifying, I have no doubt, to many of your readers, to see the result in the Cultivator. NOYES DARLING.

New Haven, Ct., Dec. 2, 1844.

MAKE YOUR OWN CANDLES.—Take 2 lbs. of alum for every 10 lbs. of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.

INTERESTING SUGGESTIONS TO FARMERS.

MR. EDITOR—Since yours of the 5th ult., I have, much to my regret, been unable till now to comply with your request, for an article interesting especially to farmers of "the Granite State." And I must now, in a hurry, write just what comes to hand, or not at all.

I beg the privilege of dropping an apology for my attention to agriculture, when the business of a Christian minister and a general educator, embraces the chief concerns of my life.

Amidst mountains and streams in "the old Bay State," I was raised a laborious farmer, till the age of twenty-one; the employment has always interested and pleased me, for its nature and importance; and I have needed its aid for recreation, health, and my support in my two other professions. Hence I have been, a large portion of my time, from graduating from college in 1808, a practical, experimental, though a moderate farmer, till I quit in the spring of 1843.

There are many subjects of practical interest to New Hampshire agriculturists, common to all in the same business. I will just name some of these, sometimes dropping a hint or two as I pass along, and dwelling some on the production and application of manures, and then say a little on some things more appropriate to this State, and other northern, cold, rocky, mountainous and broken tracts of country, hoping that each item will be in due season, by abler hands, taken up and discussed in separate articles.

I. MATTERS OF GENERAL CONCERN.—These are many; some of them are greatly important, and some, though of much consequence, have seldom, if ever, been suitably noticed and discussed in our agricultural papers. As,

1. Economy in agricultural expenses.—I found means to get along comfortably with, I think, less than two-thirds of the outgoings to which most of my neighbors were subject for the same income. I saved much in agricultural tools, and shoeing oxen and horses. Such is the provision of nature, that none, except for long journeys, and for slipperiness, need be shod at all.

2. The management and application of labor.—Here I probably saved as much more; by expending sufficient labor in proper season, by strict economy in the arrangement of business, that time and labor may not be lost, or misapplied; by using children's help to save that of men; and by laying out no more time and labor than necessary on any one business. This is a matter of great importance. I once saw one of our first rate Cheshire farmers using two yoke of oxen, a horse, two men, and a great boy, in plowing, where *I alone* could plow as well or better, and as fast or faster, with one good yoke of four year old cattle, or a stout horse! Now see the difference in one item; and so of many others.

3. The seeding department.—This is a material affair; including the quality, quantity, and acclimation of seed, the proper season of seeding, the manner of planting, and the preparation of the ground.

4. Due attention to the preservation and growth of all articles between planting and harvest.—Till dry ground flat; but not wet ground. Prepare against drouth and frost, insects, vermin, and cattle.

5. The subject of enclosure and fencing, of green fodder for cattle in summer.

6. The concerns of harvest.—Proper time; care in saving. The same produce of soil will avail much more with some than with others, by savingness. Save weeds, potato, pea and pumpkin vines, for hay. The seed of many weeds makes good meal for cattle. Foxtail, or barn grass, is a wild millet, and the seed should be saved and used.

Allow a few couplets for boys to learn and sing, when harvesting:

I.	II.
In harvest, be saving,	He that won't stoop for bean or pea,
Or farewell to thriving.	Is not a man or boy for me.
Save every potato,	Whoso slights a small ear of corn
Nor slight a tomato;	Is not to wealth or honor born.
An apple or pumpkin	The man who cares not for saving,
Is surely worth something;	Must soon beg or else be starving.
Even acorn or nut	It is always foolish to crave,
Should ne'er be forgot.	When idle and careless to save.

7. The grand affairs of storing safely, and in good or

der for domestic use or future disposal; of selling or bartering raw produce, and of exchanging it into other articles, by manufacture or feeding, call for much attention.

8. The appropriation of proper articles of produce to different soils. This subject should by no means be lightly passed over.

9. Winter business of farmers, appropriate to them as such.

10. Personal temperance, and temperance in agricultural industry.

11. Suitable work a suitable portion of the time on a farm, for children.

12. Redeeming swamp lands and worn out and sterile soils. A man near the Grand Monadnock, at the cost of less than six dollars the acre, drained swamp land, before about useless, and rendered it arable and astonishingly productive, worth at least a hundred dollars the acre! Much so I have seen "the Yankees" do on the old worn out lands of Maryland and Virginia.

13. The production and application of manures. On this subject I must dwell at large. This is a matter of chief concern with husbandmen, especially of this State. This is the means by which you may be always cropping, and yet your soil will be forever gaining.

Farmers of New-Hampshire, I lay it to your charge, that you have tilled and mowed on an average, full twice as much ground as you ought, and not made half the manure you might and should. Now I hope that you, my fellow-citizens, will examine patiently and thoroughly into the merits of this charge. If it be just, then confess and forsake your agricultural sins; if unjust, then defend your practice like men. In either case, probably both you and the world will be benefited. Of what service for us to be writing and printing on this old subject, unless it set you a thinking and acting?

All animal manures should be housed from the weather and never be frozen. Its fetor should be all absorbed from the air by gypsum, or other fit substances, put on or about it. If the bad smell, as you call it, go into the air and be driven away with the wind, you will lose the best part of your manure. Just so of the urine of all animals, man among the rest. One pound of it, saith a German chemist, is worth more for manure than a dozen pounds of the other excrescences. Then do not let a drop be lost. See that it all be absorbed, by saturating turf, peat, oats, straw, leaves, saw-dust, rotten wood, shavings, ferns, bogs, swamp-mud, pond-mud, spent tan, any dead or decaying vegetable substances, which will rot before or after being mixed with the soil. Let your pens, your necessary, your sink-spout, your carrion pit, your hen roost and clay or marl pit, above all, *your hog-stye and yard*, as well as your barn and your farm yard, have a chance to help greatly to increase your stock of manure. You could cause every hog to work enough, in making manure, to pay all his expenses! Then don't allow him to be idle.

You can treble your manure,
By means now in your own power.

In applying your manures and compost, appropriate different kinds to different soils. On deep wet soils, put coarse and long manures; on light sandy soils, put those manures which tend to gather and retain moisture, or such as have a large portion of swamp-mud, clay or ashes. Put from 30 to 50 loads on an acre, where you manure at all, and plow it in very deep on dry soil, and not so deep on wet.

A farmer not far from me, turned barren worthless upland into first rate land, by applying about 100 loads of swamp-mud to the acre.

I will now say a little on matters some more appropriate to New-Hampshire.

The first object of the independent farmer, is the sustenance, comfort and satisfaction of himself and family. With this object in view, many are willing to use endeavors to grow on their own soil some articles for table use, at an expense that would not be justifiable for other objects, such as Indian corn, beans, rye, wheat, turneps and onions. This matter of fancy and pleasure, I by no means condemn. For what we raise, we have; and what we don't, we may miss of, especially that of good quality

But if increase of property, and laying up money, be the object of the New-Hampshire farmer, then he should turn his attention to the growing and proper use and disposal of grass, potatoes, barley, oats, peas, beets, and comfrey, a new article of agriculture, and of domestic consumption; for these suit the climate and soil.

Barley has been quite too much neglected. It is easily raised on our high lands; its crop is very sure and abundant; it is very nutritious; its fattening qualities are good, and if mixed in due proportions with rye, oatmeal, a mixture of potato and beet meal or comfrey flour, it would make excellent bread, puddings, &c. &c., and would be a good substitute for wheat, if not equal to it. Then turn your thoughts more on barley.

On the late disease of the potatoe, I state just two facts and one opinion. On the sea-shore the disease was not so bad by far, as back in the country. On a farm in Jaffrey, near me, on upland mixed with remains of black growth, the crop was perfect, and on old land of good tilth, other things being equal, the destruction was perfect. My opinion is, that it is an unaccountable epidemic, prevented by some causes and increased by others.

Yours respectfully, EZEKIEL RICH

Troy, N. H., Dec. 7, 1844.

TO THE BREEDERS OF SHORT HORN CATTLE in the U. S.

In the month of May last, I proposed, through the columns of the Cultivator and American Agriculturist in N. Y. to publish an American Herd Book, provided a sufficient demand for a work of that kind should be made in the manner there indicated. At the time I wrote the proposition I had little confidence that it would be met with any *general* zeal, or approbation even, by the breeders of short horns throughout the country: and in this I have not been disappointed. It is apparent that a lethargy pervades too many of our once spirited cattle breeders on the vitally important subject of preserving in an enduring form the genealogies of their individual herds; a course, which, if persisted in, will ultimately lead, not only to their destruction, but to a large pecuniary loss to themselves, and awaken, when too late, deep and lasting regrets.

But the zeal of our American breeders is not altogether lost. A considerable number of enterprizing and spirited gentlemen have manifested strongly their desire that the work shall proceed; and with characteristic liberality proposed such a patronage as shall procure its publication.

I propose, therefore, to commence the compilation of the Herd Book as soon as sufficient material shall be transmitted to me for a commencement; and I now request all those gentlemen who wish their animals registered, to make out plain and distinct pedigrees of their stock, with all necessary references, and particulars that may be important touching their lineage; and if foreign animals, the date of their importation, and by whom made, together with such other facts as will best illustrate their history, &c. It is to be observed that the object of this work is not to *establish* pedigrees, but to *perpetuate* them; and it may at once be remarked, that any animal whose purity of blood is not properly sustained, cannot be admitted within its pages. The English Herd Book was first published in 1822. Previous to that time, and for a few years immediately following, many valuable animals from among the best families of well descended short horns in England were imported into America, whose names and pedigrees are not to be found in its columns. Many breeders in England, not then appreciating the value of such a work, neglected to register their cattle; and these remained thus unnoticed in many instances, altogether, and in others, until the supplementary volumes were published. The descendants of those importations, preserved in their purity, and their history properly authenticated, will be admitted. But in all cases where references cannot be made directly to the English Herd Book, such facts and references as will place the lineage of the animals named beyond dispute, will be necessary to accompany the registry.

In one particular this will differ from the English registry. That work has neither note nor comment. To

all but the initiated in Short-horn-lore, the pages of the Herd Book are as a sealed volume in all that relates to their origin, history, and present condition. Names of animals are often inserted without any reference whatever, apparently for no other purpose than to establish them as "Herd Book Cattle." It will be otherwise in this. Interesting facts and illustrations will accompany pedigrees as they may occur, throwing light and information, such as to place every thing relating to this noble breed of cattle in the most attractive form, and develop in the best manner their advantages to the American farmer.

In all cases where the parties are unknown to the subscriber, either personally, or by correspondence, they will please to give the name of some distinguished breeder, or citizen of their own, or a neighboring State, as a reference. This is not required through any suspicion of the entire integrity of any gentleman who may offer his cattle for registry, but as a rule for the mutual protection of each one who desires a true and unimpeachable record of short horns, (as far as it goes,) in America.

As the magnitude of the work (in pages,) will not be known till the materials are all collected, the price cannot be exactly stated: but at all events it will not exceed three dollars per copy, as noted in the prospectus last May, deliverable as there stated.

All pedigrees, &c., are requested to be transmitted, (if by mail, post paid,) to me at Black Rock, N. Y., or if more convenient to the parties, to A. B. Allen, at the office of the Am. Agriculturist, 205 Broadway, N. Y. city, or to Caleb N. Bement, American Hotel, Albany, N. Y., who will duly forward them to me. The terms for registry will be one dollar for a single animal; and fifty cents each for any larger number; to persons having 10 or more animals, with simple pedigrees, a liberal deduction will be made from this last price, according to number; the money to be enclosed with the pedigrees. Accompanying the pedigrees, the number of volumes subscribed for is also requested.

All papers to be forwarded as soon as possible; at all events, before the first of April next, as the work will be put to press to be delivered to subscribers by the first day of June ensuing.

The insertion of this notice is respectfully requested in the Agricultural papers generally, one of which to be sent to me, for which a copy of the book will be presented, and any gentleman who feel an interest in this subject will do a favor by giving information of this proposed publication to any neighboring breeder of short horns, who may not otherwise obtain it.

LEWIS F. ALLEN.

Black Rock, January, 1845.

"BALANCE OF ORGANIC NATURE."

The Chemical and Physiological Balance of Organic Nature—an Essay, by M. J. DUMAS *and* J. B. BOUSSINGAULT, *members of the Institute of France. Edited by* D. P. GARDNER, M. D., Lecturer on Agricultural Chemistry, New-York. Published by Saxton & Miles, 1844—12 mo. pp. 174.

THIS excellent little work which opens new fountains of knowledge, practical as well as theoretical, appears to have been delivered as a lecture by M. Dumas, on concluding his course at the Ecole de Medecine in Paris. It contains the opinions and result of the joint labors of Dumas and Boussingault in chemical and physiological investigations. What is meant by "*The balance of organic nature*," we learn from page 61, where the author makes the following summary of his doctrines:

"If we recapitulate we shall see that the primitive atmosphere of our globe has formed itself into three great parts or masses; one constituting the atmospheric air of the present time; a second, represented by plants; a third by animals."

"Between these three masses continual changes are effected; matter descends from the air into vegetables, penetrates in this way into animals, and returns to the air in proportion as they consume or apply it to their purposes."

"Green vegetables constitute the grand laboratory of organic chemistry. They are the agents which, with carbon, hydrogen, azote, water and oxide of ammonium, slowly form the most complex organic substances."

"Under the form of heat, or of chemical rays, they receive from the sun the force which enables them to accomplish this great work."

"Animals assimilate or absorb the organic substances which plants have formed. They alter them by degrees; they destroy or decompound them. New organic substances may arise in their tissues, in their vessels; but these are always substances of greater simplicity, more akin to the elementary state than those they have received."

"They decompose then, by degrees, the organic matters created by plants. They bring them back by degrees towards the state of carbonic acid, water, azote and ammonia, a state which admits of their ready restoration to the air."

"In burning or destroying these organic substances, animals always produce caloric, (heat) which radiating from their bodies into space, goes to supply that which vegetables had absorbed and fixed."

"*Thus all that the atmosphere yields to plants, plants yield to animals, animals restore to the air. Eternal round, in which death is quickened, and life appears, but in which matter merely changes its place and its form!*"

"The crude and formless mass of the air, gradually organized in vegetables, passes without change, into animals, and becomes the instrument of sensation and thought; then vanquished by this effort, and as it were broken, it returns as crude matter to the source from whence it had come." (p. 61.)

This carries us back to the Creation, Εν αρχην, to the beginning, when "God said let there be light, and there was light." It accounts philosophically for the succession of events as related by Moses. With light came heat, and heat developed vegetation, and vegetation prepared the way for the subsistence, and the after creation of animals.

But our business is not with speculation, but with practical affairs. The food of plants, and the best method of giving them a vigorous growth, are the subjects which are most interesting and most important to farmers. "Every plant (says Dumas) fixes nitrogen during its life, whether it obtains this element from the atmosphere, or from manures added to the soil."

And again,

"One of the first problems in agriculture, is to procure supplies of nitrogen at a cheap rate. With regard to carbon, there is no cause for solicitude; nature has provided that in ample abundance; the air, and every shower of rain are charged with it. But it is otherwise with reference to nitrogen; the azote of the air may be unassimilable, and the ammoniacal and nitrogenous salts which rain-water contains may not be in sufficient quantity. It is indispensable therefore, to surround the roots of almost every plant whose culture is of importance to mankind, with manures rich in azote, as enduring sources of ammonia or of nitric acid, which the plants appropriate in proportion as they are produced. To do this, as is well known to all, is one of the grand causes of expense in agriculture, one of the grand obstacles to its progress; for we are generally dependent upon, and have only access to, the manure we can severally produce. But chemistry is so far advanced in this direction, that the problem requiring the production of a purely nitrogenous manure, cannot long remain unresolved." (p. 43.)

It is elsewhere shown by our author that plants also fix carbon, hydrogen, oxygen, and certain earthy particles or ashes, (p. 37) as well as nitrogen, as a constituent element in their composition. It is therefore doubtful whether a "*purely nitrogenous manure*" be necessary. All compost heaps composed of animal and vegetable substances, furnish nitrogen, and other ingredients capable of promoting vegetation. It would be better therefore to give to our cultivated crops a composition containing various materials congenial to plants, than to offer them one only. How many have been disappointed in the use of lime alone, or salt, or saltpetre, and other

single fertilizers? These and other saline and alkaline ingredients may be added to compost heaps with advantage, and increase their activity as fertilizing agents. We are sometimes apt to be carried away by speculative views in farming as well as in other occupations, and to be captivated by something new, while we neglect the more common and useful things. Human excretions form a powerfully azotized or nitrogenous manure, and they compose the fertilizing ingredients in *Poudrette*, which has been highly extolled as a great fertilizer. This is doubtless so when it is not too much diluted or adulterated. But those who have embarked in its production, have done so for the purpose of making money by the sale of it. The consequence is that it is losing its character, because it is too much diluted with peat, or saw-dust, or coal ashes, rendering it feeble or comparatively inert. The excretions of birds from the coasts of Peru and Africa, are now imported by the name of *Guano;* and those interested in its sale give glowing accounts of its fertilizing qualities. Some are captivated by its recommendations and novelty, and are buying a dear article, (which is not universally applicable like barn-yard manure,) and which may be cheaply imitated by chemical combinations.

Now I insist upon it, that farmers in this and the adjoining States where manure *must* be used, should look to, and make the most of, their domestic supplies before they purchase factitious or imported manures. If a farmer raises poultry, his hen roost will furnish materials similar to guano. He may have the temple of Cloacina emptied and its contents made into poudrette, as I know was practiced by a neighboring farmer. In 1843 he had the contents of his sink mixed with sand and chip manure, together with a large cask of plaster of Paris, and a quantity of wood ashes which he had saved. These ingredients when mixed together, and dry enough to shovel over, made 20 or more ox-cart loads of good manure. Again in the spring of 1844, the excretions from the same sink were mixed with sand, some ox manure, chaff, a cask of plaster, and some wood ashes as before, making 24 loads of good compost. In 1843 the compost was employed to manure potatoes and turneps, and in 1844, potatoes alone, causing a vigorous growth in both instances.*

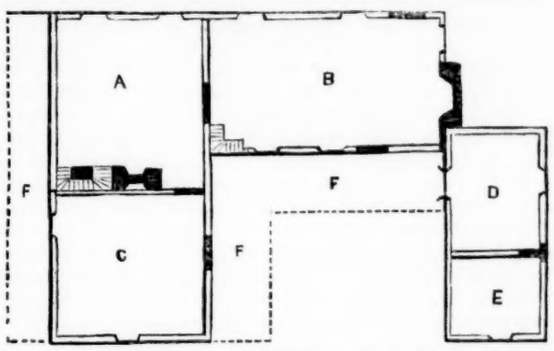
We cannot raise hogs with advantage in this part of the country without keeping them shut up in pens all the time, and well supplied with straw or sea-weed, and soil or muck, and then the manure made is part of the profit. Here swine are fed both with animal and vegetable substances, and their excretions are rich in nitrogen or azotized materials, or as Dr. Mitchill would have said, replete with "Septon." Hence it is that hog manure is more powerful than the excretions of horses or cattle. But when we mix all these together in the barn-yard compost, we have wherewith to supply all the wants of cultivated plants with carbon, hydrogen, oxygen, azote, &c. Let farmers therefore look around their own premises, collect, mix and manufacture for themselves as much as they can before they buy any manure.

The lecture or essay of M. Dumas occupies but 64 pages of the work under consideration. The remainder is made up of documents illustrating in detail the subjects touched upon in the essay. There is also an appendix by Dr. Gardner, to whom we are indebted for bringing before the American public the lecture of M. Dumas as translated from the French. We had marked some passages to guide the reader, but must refer him to the work itself as worthy of attentive perusal, hoping it may give him as much satisfaction as it did

A Practical Farmer.

Staten Island, Nov. 23, 1844.

* We do not give this as a correct recipe to make poudrette, nor is an invariable one necessary, because it may be made in different ways. Two materials are necessary in its composition; one to make bulk, and one to render it inodorous. The bulky articles may be soil, or muck or peat, tanner's bark, saw-dust, spent wood ashes, coal ashes and other things. To render night soil inodorous, diluted sulphuric acid may be used, or ground plaster of Paris, wood ashes, fine charcoal and sulphate of iron. My neighbor, among other things used sand to make bulk, because he had it in abundance, and his soil was a stiff clay



PLAN OF A HOUSE—(Fig. 22.)

Mr. Tucker—I transmit for your consideration, the above plan of a boarding-house, which I have been erecting, and which I think convenient, for the accommodation of 12 or eighteen boarders, i. e. for children attending school.

It is one story and a half, as that is sufficiently high for the placing of beds around the chambers, where most of the beds are put up, and which makes them quite pleasant. The sitting-room (A.) and parlor (C.) have a stone chimney erected between them, with a fire-place to each room—also the dining-room (B.) has a good stone chimney. That room answers for the purpose of domestic labor, such as carding, spinning, knitting, sewing, &c. beside being occupied for a dining-room. Our cooking is mostly done by a cooking stove. Stairs go up into the chambers from the sitting and dining rooms. The chambers are partitioned off into sleeping rooms, just according to the fancy of the occupant. A. Sitting room and library, 19 by 20 ft.—B. Dining room, 14 by 33—C. Parlor, 18 by 20—D. Kitchen, 12 by 14—E. Bed room, 10 by 12—F. Piazza, 7 ft. wide. A Subscriber.

Choctaw Nation, Dec. 27, 1844.

THE CULTURE OF THE SWEET POTATOE.

The Sweet Potatoe, (*Convolvulus batatas,*) was introduced into England previous to the Irish potatoe, and was in those days supposed to possess the qualities of restoring decayed vigor to the human frame; and consequently more frequently found in the shop of the confectioner, than in the larder of the cook. It is a native both of Spain and the Canary Islands, and was, as an edible, in such *bad repute*, that the renowned *Evylin*, in his work on Gardening, as early as the year 1699, recommends that potatoes should be planted in the worst ground. We are glad that we live in an age and country, where we can say, plant sweet potatoes in your best land; though in all probability, in the days of the author above quoted, the promise of this root was such that it held forth no inducements to the cultivator; and certainly time has shown that England's climate and soil, has proved uncongenial to its improvement. There are many, even in our southern country, at this day, who take his advice and neglect this crop, from the sole fact perhaps, that they themselves are not fond of potatoes, not consulting the tastes of voracious hogs and cows, who, squealing and lowing for corn and hay, would be happily regaled with a satisfactory meal from the potatoe pile.

In the south, we regard the successful cultivation of the sweet potatoe as an easy attainment. It delights in a sandy, rather light, deep, and well stirred soil, which must be located on a dry subsoil, though in some instances we have seen good potatoes raised on clay lands. A moist atmosphere, the temperature of which is warm, appears most conducive to the early growth and pleasant flavor of the sweet potatoe.

From its great use in culinary concerns, it deserves more attention at the hands of our southern planters than it has as yet received. The climate south of 36 degrees, has been found admirably adapted to its growth; and no crop can be planted which will yield more to the acre. The fine effect which they give when fed to milch cows, should make it a favorite with all who delight in good milk and butter. When dried in a brick oven, they fur

nish the material for making a delightful and wholesome beverage in the shape of potatoe beer. The sweet potatoe also furnishes a large amount of the vegetable food of slaves in the southern States during the winter months, and though they are generally cultivated as a provision crop by most planters on almost every plantation, the negroes cultivate them in the ground which is allotted to them for their own private use. Such is the partiality of the plantation negroes for potatoes, as an article of food, that as soon as the season for digging arrives, they prefer an allowance of this root to any of the cereal grains. Indeed, it seems they were relished by our revolutionary ancestry, for when an embassy was sent by the British commander at Charleston, to Gen. Marion in his swamp encampment, that chivalrous commander, with his characteristic hospitality, invited the Royalist to dine with him; the table was arranged, when he found "flesh, fish, and fowl," to consist of sweet potatoes alone. He straightway returned to the British quarters, and expressed his opinion that it was hopeless to expect to conquer men who could fight for *liberty* on *such fare* as *roasted potatoes*. Mr. John B. White, a talented and gifted son of Carolina, has made this scene the subject of a national painting which stands high in the world of art. In this picture, the negro seems delighted, more at the style in which his potatoes were roasted, than at the amazed countenance of the tory officer.

To the negro, the potatoe is a blessing; for, to the known improvidence and carelessness of this race, it is particularly adapted, as it requires no culinary skill to make it both edible and palatable, simple roasting in the ashes being the best preparation the cook can give them. It is frequently prepared for the table by baking, and makes good custards, puddings and pies; the latter equaling rhubarb pies, and made much in the same manner.

If the soil has been exhausted by previous culture, the land should be manured. My father, Mr. John Summer, who has always been successful in the culture of potatoes, observes the rule to manure broadcast, and for this purpose, has prepared in the farm yard a compost, made by hauling in oak leaves, which with the admixture of the manure of horses and cattle, furnishes the proper material, and this, when sufficiently rotted, is spread broadcast over the surface of the soil. The general plan, however, in the south, and that which is considered easies', is to *cow pen* the ground intended for potatoes, late in the summer. When the latter plan is followed, it should be continued during the early part of the winter, and followed with frequent plowings, so that the manure deposited may not evaporate, or be washed away by rains. Plow up the land very deep in January, to which we would recommend a subsoiling to those who have the proper implement. Plow again in February, and in March repeat with a like plowing, immediately after which, bed up the land with a suitable plow four feet wide; upon these beds drop the potatoe slips, six or seven inches apart, covering them with a hoe, one and a half inches deep, with good mellow soil.

It should be remembered that the proper preparation of the soil, is of very great importance to the future crop. This mode of planting in beds is usually termed ridging, and simply to cross the beds into equal squares with their width, we can form potatoe hills by drawing up the corners of the squares with a hoe. We have tried both hills and ridges, and have no preference, though the soil when planted in hills is most likely to be washed away by heavy rains. From three to four slips should be planted in the hill. As soon as the slips begin to sprout, the ridges or hills should be scraped off with the hoe, which will enable the young plants to come up readily, and immediately after they have appeared above ground the beds should be plowed down carefully, and the plowing to be performed as close to the plants as they will bear, so as not to disturb the parent slip. This will yield to the young plants that warmth which is so much desired in this culture, and potatoes thus cultivated will stand the summer drouths better than those which have been cultivated otherwise. Frequent plowings, with a few times hoeing, is all that is necessary, until the vines attain a length which interferes with the plowing, at which period the ridges and hills should be drawn up with the hoe, fuller than they were originally, and in such a manner that they should be hollow at top. Great care should be taken not to draw any soil on the vines, and therefore whilst drawing up the beds they should be gently raised by the hands. Just before the vines reach the bottom of the beds, a plow should be run twice through the rows in order to give them mellow earth to root in. This will serve to sustain the vines in extreme drouth; and as the leaves are almost the only organs which feed tuberous roots, I would earnestly recommend an abandonment of the practice of topping potatoes or of tearing the vines with a plow, and particularly the practice of making a calf pasture of the potatoe patch late in summer.

Potatoes for planting should always be raised from cuttings, as they are generally more succulent, and vegetate better in the spring than those which are raised from small potatoes, and hence large potatoes bringing stouter plants, are preferable to very small slips.

The product per acre may be variously estimated. From two to three hundred bushels are commonly produced. My father has raised upwards of five hundred bushels of good potatoes to the acre, and from two to three hundred bushels has been an average crop with him. They were of the dark mottled variety usually called the Spanish potatoe, which for a general crop, we consider best, though any and every sort should be cultivated, which are regarded of good quality, and as there are perhaps more than twenty approved varieties, we are not advocates of any particular one. The yams suit a sandy location, whilst the dark Spanish would succeed better on clay soils. There are several varieties with a red skin, which are much esteemed by some. The variety known as the "Bermuda," are perhaps the best early variety, and for this reason, a portion of the crop should be planted of them, or some other favorite early variety. There appears to be only two distinct varieties of the yam, the yellow and white. Both should be cultivated by putting the slips in a bed, and drawing the sprouts as they appear above the ground, and planting them in ridges. In this way, but a comparatively small number of slips are required of this variety; for all other varieties of the sweet potatoe, we would advise to plant the root itself. The yam is easier preserved during winter, and late in spring; is of better flavor than any of the other varieties.

My friend, Col. R. F. W. Allston of Georgetown, during the past season, tried an experiment, which, as it is new, and upon the whole, has succeeded admirably, I will notice here. The land was laid off in beds four feet apart, and upon these the seed were planted, by laying them on the level ground eight inches apart, and covered over with "tailings," (the straw, &c. blown off in winnowing rice,) to the depth of a foot. In consequence of the severe drouth of the past spring, the stand proved a very bad one, the sprouts appearing at the distance of one, two, and three feet apart. The prospect, he says, for a crop, was very meagre, until the month of July, when the plants which were standing, grew off with a vigor quite remarkable. In consequence of the drouth, a little earth was drawn upon the beds once, and the grass which showed itself was once picked off. The potatoes were taken up the second week in November, and they yielded 283 bushels of excellent roots to the acre, several of which were exhibited at the Anniversary meeting of the State Agricultural Society, weighing from 4 to 6 pounds. They were yams.

Our plan for preserving potatoes is simple. A circular bed is formed 8 or 10 feet in diameter; this is raised a foot above the surrounding surface to ensure its being dry; on which we place dry pine straw, corn stalks, or pine bark; in the centre of this, we set upright a plank tube with a great number of holes bored in the sides; around this tube the potatoes are piled up until the cone is completed within a few inches of the top of the tube, when they are covered up with corn stalks, pine straw, &c., and lastly with earth five or six inches thick. The tube may be closed in frosty weather by a wisp of straw. During mild weather it should be opened in order to allow the heated air arising from decayed or bruised potatoes to escape. With this, and the addition of a tempo

rary shelter, we have always succeeded in saving potatoes during the winter.

We unhesitatingly recommend that the same land be planted in potatoes each succeeding year, believing that the culture of this crop adapts the soil for the increased reproduction of the root, and that the covering of the vines when potatoes are gathered, restores to the soil a larger supply of nutrition, than is consumed by the production of the crop. WM. SUMMER.

Pomaria, S. C., Dec. 18, 1844.

THE HORSE SPECTRE.

MR. EDITOR—I love a good Horse—in fact, *I love them that love Horses.* I once rode fifty miles on horseback to see a broken down Racer, and was amply repaid for my labor. Indeed, he was a remarkable animal on many accounts; and although thorough bred, with a pedigree of the greatest purity, he was as heavy as many a wagon horse. His color was a deep chestnut; bordering on black, with eyes of light brown, that seemed to be planted in the cheek, about midway between the nose and ears, giving him an appearance quite unearthly: his action also, quick and hurried, and of the most eccentric character, was calculated to inspire a sort of terror in the beholder, leading him to be careful how he ventured into the enclosure where he was confined. And yet, withal, he was perfectly gentle and manageable, and of the most generous disposition. At the time of which I write, he was in possession of the Messrs. Badentram, of Presteign, Radnorshire, Wales, (England) and there I saw him. Indeed, his history throughout, is so remarkable, that I feel a desire to relate it, with your permission, for publication in the pages of the Cultivator; true to the letter.

One day, a stranger called at a farm-house in that part of the country to inquire for board. He was a citizen of London, a Jeweller, and had been ordered into the country by his physician, for the benefit of air and a mild diet. The farmer observed they had not been accustomed to take boarders, but thought perhaps he might as well remain where he was, and try how he liked their accommodations. On the stranger inquiring the terms, the farmer said that depended upon how they liked each other; and at the end of a month, when the stranger offered to pay, the farmer said his wife and he had not yet derermined upon what it should be. In another month, the health of the stranger being reinstated, he again asked for his bill, when the farmer informed him that he and his wife calculated they were about quits, as his society and conversation had been to them of quite the value of what he had received; and finding that nothing he could say would alter that determination, the stranger took his leave, promising, that he would, some day, send him a present from London.

Not long after, a man led into the farm-yard, an old blind mare of the highest blood and pedigree, heavy in foal by the best horse in England, PHANTOM; an accompanying letter requesting that she might never be sold, but be returned, if the farmer should grow weary of keeping her; hinting also, if the foal should prove a horse colt, that his name be called SPECTRE. In due time the mare brought a horse foal, which, with the extreme care bestowed upon him, grew up a remarkably fine animal, being entered to run for a plate at two years old, which he won with the greatest ease to himself. Not so however to the rider, who, with the utmost difficulty could manage to keep himself on his back by holding on to the pommel of the saddle; bridle, whip and spurs, being totally useless and out of the question; for with nose to the ground, and his feet at every stroke appearing above his head, the back a semicircle at one moment, and an inverted ellipsis at the next, it would have been easier to sit a camel in full trot! no other person being able to accomplish the feat of *sitting* him—to *guide* him, being a vain and useless attempt. After this, he, with the same rider, won every thing he started for, until on the eve of a very important race, in which he was backed by the whole country at immense odds, a stranger offered one of his owners (there were two persons who had shares in him) a very large sum of money, if he would permit his horse to be beaten! The temptation was too great to be withstood, although the man knew that his partner had risked his all upon him, as also many more of his personal friends: the only way to accomplish it being to overweight him. This was accordingly done, and on striving against a saddle full of shot, the generous and noble animal sprained his shoulder and broke down, his rider afterward declaring, that even then, he had more work to make him lose, than he ever had to make him win. And while in this broken down condition, he won three silver cups at three different meetings; the last at the great race of Worcester, still fresh in the memory of thousands, where he distanced almost the whole field.

After this, he was withdrawn from the turf, and was kept as a stud horse; and as such I saw him with his blind dam, in an adjoining paddock again in foal, at the age of 28 years! Many noble horses, the best in that part of the country, were produced from this stock, the owner making an annual sale by auction, chiefly of match horses for the carriages of the nobility, many pairs bringing from $1500 to $2000 at three years old; the last lot put up being *Spectre* himself, with the intent however, of buying him in privately, and this was done more than once, at the price of $5000.

When the stranger left the farm-house for London, he desired the servant girl to inform him when she should be about to get married: this she did, and received as a present, a valuable diamond ring; which, if you will allow me to *suppose* she sold for a sum of money sufficient to stock a small farm, upon which she and her husband resided for many years in contentment and happiness, you will then have a *finale* in keeping with the main story, for the truth of which I will vouch. J. P.

THE JERUSALEM ARTICHOKE.

(Helianthus Tuberosum, Linn.)

MR. L. TUCKER—My attention was directed to the history and culture of this plant, in consequence of flattering experiments made with it by Mr. Gunnell and others in Greenville in this State, and as it is rapidly obtaining in some parts of the State, a few remarks in connection with its superior advantages as a root crop, may not be objectionable to the readers of the Cultivator. Although it is called so, it is botanically, in no way allied to the Artichoke, but is of the same genus as the sun flower, which it much resembles. The term Jerusalem, is, according to Webster, a corruption of girasole, the Italian name for sun flower; and it derives the appellation of Artichoke from some fancied similarity in the taste of the tubers with the artichoke bottoms. It is a native of Brazil, and was first carried to England about the year 1620, and before potatoes were so generally in use, was extremely popular as an edible root. Mention is made of it in old agricultural treatises, as the *Canada potatoe*, to distinguish it from the common potatoe, and it was sometimes called the *Virginia potatoe*. It was regarded as wholesome, and is of an agreeable taste, though it is never dry and mealy like the potatoe, being rather moist and soft in its texture, and is nutritious. Being hardy and perennial, they succeed in almost all kinds of soil. It was almost lost sight of in agriculture, until within a few years. Latterly it is obtaining as an article of food for domestic animals.

Twelve to fifteen hundred bushels have been obtained from an acre, when properly cultivated, and being relished by horses, cattle and hogs, it is undoubtedly the most profitable root crop which can be planted in the south; and perhaps it might succeed in more nothern regions. It is rich in farrinaceous substance, and all animals do well and improve when fed upon them. Last spring a friend sent me about a quart of tubers. I did not think this small quantity worth planting, as they were much injured and dried up by their long exposure. On the 3d of May, fully two months after they should have been planted, I had a small space of ground, about a rod, prepared, and put them in. A drouth ensued, and they did not come up soon, and consequently lost a great deal by their being so late. They were planted in drills two and a half feet apart, and twenty inches in the drill; but the seed being so badly injured, the plants were very ir

regular. They were plowed once, and the grass and weeds afterwards removed with the hoe. In November I had them plowed up, and upon gathering them, found I had ten bushels; and it is my opinion that if they had been picked clean from the land, the yield would have reached twelve bushels. The tubers filled all parts of the soil, and some of them were two feet long, consisting of small bulbs connected by succulent roots. The roots are white, and extremely tender, whilst the tubers are slightly tinged with red. The roots make the best slips for planting, and if cut up, leaving an eye to each slip, they readily vegetate. When it is intended to feed this crop to hogs, they require no harvesting, for they readily withstand our mild winters; and if the hogs are turned in on them, they usually provide for themselves. For calves, sheep and horses, they must be gathered and washed, but unlike other roots, they require no cutting up. They might be fed to sheep, by merely plowing up a few daily, and letting the sheep eat them immediately from the ground. In consuming this crop, the hogs give the ground a thorough plowing, and by turning under the stalks and leaves, they add much to the soil. Some have asserted that it is an exhausting crop, but from the genus of the plant, I infer it is not. The leaves are large, and the stalks are crowned with beautiful yellow flowers.

I shall plant them at the rate of three bushels to the acre next year. I think that quantity sufficient. They grow here on all dry soils, but will not succeed well on damp locations. Very respectfully, A. G. SUMMER.

Pomaria, S. C., Dec. 1, 1844.

PRODUCTS OF THE DAIRY.

OUR article in the January paper having introduced this subject to the readers of the Cultivator, we shall now proceed to give some statistics relative to the quantity manufactured, and endeavor to show that the market which is now opened to our cheese in foreign countries offers great inducements to our dairymen not only to continue in the business, but to improve the quality of the article until it will be sought for in all foreign markets as well as in our own country. The census of 1840 gives the aggregate value of butter and cheese manufactured in every town in the United States. From the statistics thus gathered much valuable information may be obtained, although, if the number of pounds of each had been given, we might have arrived much nearer to correctness, as the price in different parts of the union differs materially. We doubt also whether entire confidence can be placed in the correctness of the census, although it may approximate as near correctness as any information within our reach. The amount at which the products of the dairy were valued in 1839, in the State of

New-York, was	$10,496,021	New-Hampshire,	$1,638,543
Ohio,	1,848,869	Massachusetts,	2,373,299
Pennsylvania,	3,152,987	Connecticut,	1,376,531
Maine,	1,496,902	Vermont,	2,008,737
New-Jersey,	1,328,032		

The quantity made in the southern and western states is comparatively small. Virginia however shows an aggregate of $1,848,869. The aggregate value of the products of the dairy in the entire union is put down at the round sum of $33,787,008. The quantity of butter and cheese made in Ohio has greatly increased since 1840. Indeed without any evidence before us we should presume that the amount sent to market from that state has doubled in the last five years, while the quality has greatly improved. A correspondent in the city of New-York, largely engaged in the produce business and well qualified to judge upon these subjects, says,—"As to the quality of butter and cheese made in Ohio, it is rapidly increasing and greatly improving in quality, and I think bids fair to go ahead even of the Empire State in quantity manufactured. It will not be long before they will match us in quality. A large amount of the butter and cheese made in Ohio goes south and west, which is so far favorable for that made in our own State." That Ohio is to be one of the most important States in the Union in her dairy products as well as in every thing else which pertains to the agriculture of the northern States, there can be little doubt.

The State of New-York must, however, continue to furnish immense quantities of dairy products, and as we remarked in a former article, "the central and northern parts of this State must constitute *the dairy district*, from whence must be derived a very great proportion of the butter and cheese used in our large cities, and which is needed for shipment to Europe."

Of the ten and a half millions of dollars worth of dairy products in the State of New-York in 1839, more than three millions worth was produced in the eight counties of Oneida, Jefferson, Herkimer, Oswego, Madison, Otsego, St. Lawrence and Lewis. Chenango, Cortland, Onondaga, Steuben, &c. also produced large quantities. Orange, Duchess, Delaware, and other river counties produce large quantities, but as we have before remarked, a very great proportion of this is sent to market in small kegs, pails, &c. to supply the summer demand. That from the other counties named, as well as from the western States, is relied on for a winter supply.

The amount of butter, lard and cheese which arrived at tide water through the New-York canals in the several years, since 1841, is as follows: The butter and lard having been kept in the same account, we are unable to get at the exact amount of each.

	1841.	1842.	1843.	1844.
Butter and lard, lbs.	16,157,653	19,182,930	24,215,700	22,202,700
Cheese, lbs.	14,171,081	19,004,613	24,336,260	26,598,300

This table shows a constant increase in the quantity of butter and lard until the present year. This year, however shows a falling off in these articles, which may be attributed partly to the fact that the great increase in cheese has caused a corresponding decrease in butter, and in part to the limited amount of lard sent to market the present year. The increase in cheese is very great, being nearly double the amount in 1844, which was sent to market in 1841.

To show the increase and the relative proportions of butter and cheese, we give the amount of each shipped from this place (Rome, Oneida co.) in four years, with the average price in each year

	Butter.		Cheese.	
1841	1,411,266 lbs.	15 cts.	1,532,196	5 cts.
1842	1,625,069 "	10	2,192,753	5½
1843	1,486,044 "	9	2,795,489	5
1844	1,914,735 "	11	3,151,431	5

At Utica the amount cleared is probably about equal to the amount shipped here, and at Little Falls large quantities are also shipped. At Sacket's Harbor, Oswego, and several other points on the lakes, and also at many other places on the Erie and other canals, considerable quantities are also annually shipped.

It will be noticed by an examination of the above table that the increase in the quantity of cheese is far greater than the increase of butter. This is accounted for by the foreign demand which has sprung up during the last few years. The success of experiments in shipping to Europe has directed public attention to the advantages of a foreign market for the surplus produce of our dairies, and more care has been bestowed upon the manufacture of cheese, especially in large dairies. Circulars, addressed to dairymen by shippers and other dealers, giving directions for the modes of manufacture, and the size and shape of the cheese, &c., had the effect to arouse attention and encourage investigation, until many of our cheese makers now are as familiar with the method of manufacture required for the English market as our own.

From "Wilmer & Smith's European Times," (published in Liverpool) of Dec. 4th, we extract the following remarks: "The imports of cheese have been large during the month, and both as regards their condition on arrival, and the general quality and selections of the shipments, are proving decidedly superior to those of last season. Their sale is consequently much facilitated, and we have every prospect of a large and steady trade in the article during the winter. The demand in the past month was large, increasing towards the close in consequence of the advanced rates obtained at the Chester and other cheese fairs; a corresponding advance cannot be secured in America: but we quote the market fully 2*s.* to 3*s.* higher for all qualities, and with a firm tone on the part of the holders. A higher range of prices than usual is ex-

pected to be maintained throughout the season, owing to a deficiency in the make of English cheese, and the great advance in the value of butter." The same paper says: "Butter continues to advance in price, and in confirmation of our last advice, we can with confidence recommend shipments from the United States, and would suggest that the lower priced qualities (if fit for eating or for culinary purposes) would be the safest shipment. In the finer and milder sorts we would fear such a deterioration in quality on the passage as would bring them down to the level of the inferior."

These paragraphs are given here not so much to advise our readers in regard to price, &c., as to show what is the opinion prevailing in England in relation to the quality of our dairy products, and also that we can reasonably expect a good demand for these articles abroad.

Our New-York correspondent, from whom we have before quoted (J. E. Southworth, Esq., of the firm of Southworth & Beach, 31 Water-st. N. Y.) remarks in relation to exports as follows: "I do not think the quantity of cheese shipped to Europe this year much larger than last, although the shipments were made earlier last season than they have been this, consequently a large amount was damaged by hot weather. This has learned shippers to be more particular, and not to send cheese in warm weather. The shipments have been very heavy during November and December, and those heard from have all paid well. The cheese sent this season has been of much better quality than that sent last season; in fact no prudent shipper will now purchase any but the best quality. *The shipments are not half as large as they would be if we had a better quality of cheese to send to John Bull.* This ought to stimulate our farmers to make a better quality."

Thus we see that we have opened to us a foreign market for our cheese, which may be increased to almost any extent if the farmers of this country will so far consult their own interest as to make a good article and one suited to the English market. Without expressing any opinion relative to the question of a tariff, we have no doubt that all will agree with us that it is matter of no small moment to American farmers to have a ready and remunerating sale for their surplus produce in foreign countries, and that foreign demand for American provisions does now, and will continue to exert a favorable influence upon our agriculture in all its departments.

The following table will show the amount of butter and cheese exported from the port of New-York in the years 1843 and 1844.

	1843.	1844
Butter, firkins,	48,034	28,761
Cheese, casks,	8,964	11,241
do. boxes,	62,112	77,173

Showing a decrease in the exports of butter, of almost twenty thousand firkins, and an increase in the exports of cheese, of not far from one-fourth.

We have thus glanced at some of the statistics relating to the manufacture, exports, &c., of the products of the dairy, and have prolonged this article to a great length without arriving at an important point in our subject viz. The means which should be adopted to secure the greatest increase in quantity and improvement in quality of dairy products. This will form the subject for another article, when we hope to prove beyond the possibility of a doubt, that it is in the power of nearly every dairyman to make a *good* article, and also that an increase of one-fourth in the average per cow may be made without any thing like a corresponding increase in expense. This we are aware is a bold position, but it is nevertheless one susceptible of proof, and we shall produce something more than our own assertions to establish the positions assumed. In the mean time let us beg of those dairymen who are making no more than one hundred pounds of poor butter, or perhaps two hundred and fifty lbs. of poorer cheese per cow, to investigate the subject, and see if they cannot discover the cause of their want of success.

E. COMSTOCK.

FARM SCHOOL.—The late JOHN PARKER, Esq. of Boston, among other munificent donations, gave $4,600 to the Farm School, on Rainsford Island.

IMPROVEMENT OF WORN OUT LANDS.

WE have received a copy of a Report on this subject, made to the Union Ag. Society, Hartford county, Conn., by SAMUEL CAMP. Not having room for the whole, we give the following, which embraces the substance of the article.

In directing the mode of improvement to be pursued, Mr. Camp thus speaks:—"In the first place attend to the barn yard. This should be of sufficient size for all your cattle, and in a dry place, the water from the eaves of your buildings being all turned out of the yard. An embankment should be made around the buildings and yard, to prevent any water from coming in which is without. And as special care should be had to the liquid, which is the most valuable part, let your yard be hollowed in the middle; the outside twelve feet in width, to be raised high enough to keep your cattle dry. This twelve feet at least should be covered with cow houses. Litter this over with straw or some vegetable matter, then a large supply of peat or muck, and litter over the top, to keep your cattle clean; turn all your cattle on every night through the summer, having brined straw or hay in the racks and mangers, and plenty of water in the troughs, (as a good well of water is essential.) Turn none of them off day or night in the winter. Your horse stables need no floors; level them off, and keep them well littered; always feeding grain sufficient to induce the poultry to scatter the droppings among the litter that you may not stumble over them when frozen. Pursue the above mentioned course with muck and litter, until spring; then clear all out applying chiefly to corn. Begin then anew —treat your hog pen in the same way, only the manure from this should be carried out late in the fall and spread evenly over the barn yard, and littered with straw, and if you have put in weeds with ripe seeds, a few bushels of salt may be put in to kill them. Near your out-house, place some loads of muck or peat with a few bushels of lime or ashes, having a box placed under the building that you may draw it out often and mix its contents with your muck—thus making your own *Poudrette*. If these fall short of being enough, take a supply from muck or peat swamps. To one cart load, put of ashes 2 bushels, of lime 1 bushel, of crushed charcoal 4 bushels, of clay one-third of the whole. Always see that your land is seeded after cropping. Green vegetables draw their support in a great degree from the atmosphere; hold the dews, and enrich the land, until the seed ripens; they then take from the soil, and if the substances are not there which they require, there will be a failure of the crop. Wheat, clover and millet, require lime in the soil to ripen well."

Mr. Camp recommends plowing in green crops, the best of which he thinks is clover. Wheat and rye are also mentioned as suitable to stand through the winter and plow in in the spring. He says—"If land has nothing green growing upon it, keep it mellow and free from crust, that it may drink in the dews, and in a little time it will produce a crop without manure. Dry stubble, where there is nothing green, should be turned under."

Mr. Camp closes with some good remarks on the training of sons and daughters. His advice to farmers on this subject is thus given. "Train all your sons and daughters to habits of industry, on the farm or in the kitchen; let the mind and hands go together to the work, and both are strengthened. Give the mind proper food, let the thoughts be employed in something noble, benevolent, and exalted. Much has already been learned, and the wise man regards this as an evidence that much more knowledge may be acquired. Let none say to the mind 'thus far shalt thou go and no farther'—it is a little spark from INFINITY, which knows no bound!"

PRAIRIE GRASS.—Among things which are "*decidedly flat*," the Prairie Farmer mentions the following:—"If a man has got him a dairy of a dozen cows, calculating to get rich in making butter, without having made any preparation for them in the way of feed—bragging loudly to some eastern friend, of the all-sufficiency of prairie grass—when he finds that grass as dry as stubble from August to Dec.—we think he will feel decidedly *queer*."

CONDENSED CORRESPONDENCE, &c.

FINE FRUIT IN OHIO.—We learn that the Hon. JAMES MATTHEWS, M. C., of Coshocton, Ohio, has been for some years making an extensive collection of choice fruits from every section of our country, and from abroad. He has now growing about six hundred varieties, including apples, pears, peaches, cherries and plums, beside a great variety of nectarines, apricots, grapes, gooseberries, strawberries, &c. His trees are all young, only about fifty of the varieties having produced fruit the past season. We know of no finer climate for fruit than that of Ohio, and we are glad that Mr. M. is making such efforts to ascertain what varieties are best suited to it. He will, by these efforts, confer a benefit upon his constituents, which will entitle him to their lasting gratitude. In the culture of gooseberries, of which Mr. M. has 34 kinds of the large English varieties, he has been very successful for two years past, having entirely escaped the mildew which has proved so great an obstacle to the culture of this delicious and healthy fruit. Should his fruit escape the blight another year, he will be more inclined to think it is owing to his, in some measure peculiar treatment, and will give the public the benefit of his experience.

THE AMERICAN LARCH.—Extract of a letter from Mr. M. INGALSBE of Washington county in this State, to the Editor:—"Much has been said of late in the Cultivator, about the American larch, or tamerack, for timber. We have had much experience in this section, in the use of it. The farm upon which I was 'brought up,' is connected with a swamp, 4 or 5 miles long and one quarter to half a mile wide, and the principal timber growing on it was formerly tamerack. There appears to be two varieties of it; one is nearly all sap wood; the other has but little; the former is nearly worthless for posts or rails; the latter is considered to be the best timber for posts that can be found in this region, red cedar excepted. I have heard several old gentlemen say they had posts that had been in the ground for thirty years and upwards, while I removed a piece of fence that had stood only eleven years, and the posts, many of them, were rotted nearly off. They were of the first variety I mentioned. This worthless variety is what some call the 'second growth,' a term which I do not precisely understand. This timber is valuable for building; it grows straight, is very stiff, and will hold a nail equal to white oak. The rafters to most of the buildings in this section are poles of this wood. A gentleman of this town told me that his front gate post had stood in its place 30 years, and was an old weather beaten post when he put it there; I examined it, and it was quite sound at the time. The wood is the common wild black cherry. I never heard it recommended from any other source."

DEATH OF CATTLE FROM DRY CORN-FODDER.—JAS. GRANT, Esq. of Davenport, Iowa, informs us, that on turning his cattle into the corn-fields, after the corn was gathered last fall, several of them died from constipation. The stoppage took place in the manyplus, (manifolds) or third stomach. The death of the animals was so sudden that cows which gave a good mess of milk at night, were dead the next morning; and oxen which worked as well as ever in the morning, died in the afternoon. After having lost several of the herd, among which was a valuable Durham bull, Mr. Grant saved the remainder by administering heavy doses of Epsom salts, and following generally the treatment recommended in the November number of the last volume of the Cultivator, in reference to a disease by which Mr. Devereux of North Carolina lost a Devon bull. Mr. Grant says if the Cultivator had reached him a week sooner, it would have saved many of his animals.

CLOVER, CROPS, &c. IN MISSISSIPPI.—Extract of a letter to the editor of the Cultivator, from A. M. MAYO, Esq., dated Holmes Co., Dec. 22:—"I am this year trying an experiment with red clover; and so far, it looks well. I think it will do well; if so, it will be a great thing for our country. I am not aware of any experiments with it having been tried in our region of country. I intend making an experiment with corn sown broadcast, for fodder, next year. Millet does well with us. Our cotton crop this last season was very light in many places, owing to the worm; and, added to that, the low price of the article, makes it a poor business. We shall be obliged to alter our system of farming, if we expect to live by it."

SPREAD OF THE POTATOE MALADY.—Mr. JOHN TOWNSEND, of Zanesville Ohio, informs us that the disease in potatoes, spoken of in the eastern papers, made its appearance in his neighborhood last season. It seemed to be generally confined to particular varieties. Mr. T. says, "a round potatoe, of a dull red color, brought from the State of New-York in 1833, suffered the most," so far as his observation extended.

MONROE CO. AG. SOCIETY—GREAT CROP OF CORN.—Extract of a letter from T. H. HYATT, Esq., dated Rochester, Dec. 18:—"The Annual meeting of the Monroe County Agricultural and Horticultural Society, for the election of officers, the awarding of premiums on field crops, &c., was held in this city on the 11th inst. An interesting and elaborate report on farms, the best modes of farming, &c., was made by Mr. Langworthy, chairman of the committee appointed to examine and award premiums on the best farms in this county. The awards of the committees were but few. The most remarkable crop offered, was by Rufus Beckwith of Henrietta, being that of 126 *bushels of shelled corn per acre!* The whole Transactions of this Society for the year, are soon to appear in pamphlet form. The following are the officers elected for the ensuing year: John H. Robinson, Henrietta, President; Elisha Harmon, C. K. Hobbie, F. P. Root, V. Presidents; James P. Flogg, Bochester, Treasurer; H. M. Ward, Recording, and Thos. H. Hyatt, Rochester, Coresponding Secretary."

PREJUDICE.—A correspondent who dates at Lenox, N. Y., and signs "RAMBLER," gives us some of the objections of a very narrow-minded and prejudiced man to agricultural papers and to all improvements. It is an old saying, that "*it takes all sorts of people to make a world*," and this saying furnishes the only evidence we are able to give, of the advantage which some men are to society at large. The man who opposes improvement, is in principle and fact a *savage*—his proper place, if he really belongs to our territory, is "west of the Mississippi"—not, however, among the Cherokees, Choctaws, or Wyandotts, for they take the CULTIVATOR, and are rapidly advancing in agriculture and other arts—but among the Crows and Black-feet, he would probably find congenial spirits. We are not surprised that a man of the prejudice and obstinacy of the one described by "Rambler," should lose "*two thousand dollars by farming.*" The resolution he has adopted of doing all his work himself, for the future, is no doubt a good one. Under such narrow policy, the less that is done, the better—small business is adapted to a small mind.

THE APPLE WORM.—We give the following, from a letter from R. L. PELL, Esq.—"I have for years been at a loss to know from whence the worm was derived, which is always found in fallen fruit, or in that ripening prematurely; by accident, last spring, when my fruit trees were in bloom, a limb of an apple tree was cut off, I examined the blossoms, and discovered numerous small worms, precisely like those found in the fruit, at a later period; even many of the buds still unopen, contained a worm. I observed as the fruit enlarged, the worm eat its way into it, and caused it to fall. The season was still cold, not a fly of any description had yet appeared; the conclusion I arrived at was, that the egg had been deposited early in the autumn in the bud intended for fruit the ensuing season. Last fall I noticed my trees frequently, and invariably saw numerous winged insects flying around them, and alighting on the buds, but could not discover to what family the obnoxious one belonged. Can you throw any light on the subject?"

CONTINUATION OF MILK IN COWS.—Extract of a letter from Mr. CALVIN BUTLER, Plymouth, Ct., to the Editor: "On the subject of keeping cows in milk from year to year, I have had some experience. It is not true that cows kept constantly in milk, will, after a lapse of years fail of their milk. This depends upon the nature and disposition of the cow for milk or fattening. I kept one in milk for five years constantly, and she increased in her

milk every year, and it was almost impossible to dry her when I turned her to beef. I am now milking one for the third year, which neither gains nor fails in her milk, and I presume would not, should she be milked ten years. I am milking another for the first year, which I presume will continue to gain, from year to year. My cows have been kept from the bull—not spayed."

SPAYING COWS, &c.—In a late letter to the Editor, W. S. GIBBES, Esq. of Chester District, S. C., says:—"In your Nov. number, p. 357, notice is taken of spaying cattle. Mr. James Knox, an active and enterprising young farmer, and neighbor of mine, has been in the successful practice of spaying milch cows and heifers for some years past; the cows do not seem to suffer much, never lose their milk, and one that he spayed three years ago, is giving yet her usual quantity of milk. He has never lost one. This autumn he successfully spayed an ewe for me, as an experiment."

FLY IN WHEAT.—Mr. Wm. Whiting of New-York, sent us an extract from the Detroit Advertiser, recommending oats to be sown in the fall with wheat, four quarts to the acre, for the protection of the wheat against the fly. The argument used in favor of the practice, is that the oats come up first, and grow the most luxuriantly, and that the fly will deposit its eggs on them instead of the wheat—that the winter kills the oats, and the eggs or worms in the plants, perish. We have heard this practice recommended before, but cannot say, from experience, any thing in regard to its efficacy.

MEDITERRANEAN WHEAT.—From a letter of N. J. PALMER, Esq. Milton, N. C.—"I have been trying the Mediterranean wheat for two years; the seed of which, I procured from Philadelphia. It succeeds admirably, has a very large plump grain, and makes excellent flour. It will grow much better on thin land than our May wheat, will ripen as early, and is not so liable to injury by the fly, or affected by the rust."

BERKSHIRE AG. SOCIETY.

ADDRESS OF FREDERICK J. BETTS, ESQ., before the Berkshire (Mass.) Ag. Society. This address is highly creditable to its author, and the ancient and respectable society to which it was delivered. Mr. Betts' remarks on the advantages of agricultural associations, are well-timed, and appropriate. The Berkshire Society itself, one of the oldest in the country, furnishes an excellent example of the kind. To this society belongs the honor of instituting *Cattle Shows* in America—the first of which was holden at Pittsfield in 1807. Since that time they have been continued annually; each succeeding year adding new interest to the exhibitions, and increased usefulness to the society.

In relation to the duties of committees at Cattle Shows, we give a paragraph from Mr. Betts' address, which we consider particularly worthy attention:

"The reports of the *Committee of Judges* may be made a most important means of desseminating agricultural knowledge; the mere awarding premiums is a most unimportant part of their duties. To distinguish the nice shades of difference in different specimens subjected to their inspection, will of course frequently require from them close observation; and the exercise of a discriminating judgment, and in this consists their great duty to competitors. Their duty to the Society, and to Agriculture, requires that they should accurately note and specify in their reports, the individual merits and demerits, of each article inspected by them, and clearly describe the points in which the preferred article surpasses the others. The principles too upon which they award their premiums are of the greatest importance. It is by no means true that the best farm, the best animal, or the largest crop is always entitled to the *first*, or even to *any* premium. The farmer, of all other men, is bound to act upon the lesson taught his countrymen, by America's great philosopher, "*not to pay too much for the whistle*," and though it may therefore be true, that "*the man is a benefactor of his race who makes two blades of grass grow where but one grew before*," it is certainly equally true, that he is no *benefactor to the farmer* if his two blades triple the expense of the usual mode of raising one. Award then your premiums to him who *does the best with his means*, whether those means be great or small; and let the consciousness of doing wonders reward the ambitious aspirant for fame, who works upon other principles."

SUBSOIL PLOWING.—The committee on Root Crops for the Worcester (Mass.) Ag. Society, states that one of their number had once seen a demonstration of the great advantages which would be derived from the more common use of the subsoil plow. Mr. Isaac R. Barbour who received the first premium for a crop of carrots, had two lots, on one of which the subsoil plow was used, and on the other, only the common plow. The difference in the appearence of the crop in favor of the subsoiled portion, was quite evident.

SEED AND IMPLEMENT STORE,
At Rome, Oneida Co., N. Y.

COMSTOCK & JOHNSON, proprietors of the above store, will be happy to receive orders for seeds of any kind, and also for all the most approved implements used by farmers.
January, 1845—tf

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.
Also, his thorough bred Stallion Young Florizel.
Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

PLOWS

OF the most approved patterns now used in this State, will be constantly kept for sale either at wholesale or retail at the Rome Plow Factory, corner of Dominick and Washington streets. The *Diamond Plow*, which received the State Society's first premium last fall, is made by us in good style. Farmers in want of Plows, Cultivators, Cradles, Scrapers, &c. are invited to call.
A liberal discount to those who buy for retailing.
Jan. 1845—tf BRAINARD, COMSTOCK & CO

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.
Dec. 1, 1844—tf.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.
Utica, January 1, 1845—3t*

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.
The south eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.
The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deed. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.
Dated New-York Dec. 9 1844—3t.

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CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by E. W. BULL, Seedsman.
Feb. 1—3t.

LOUISVILLE KY. SEED AND AGRICULTURAL STORE.

GEORGE, LAPPING & Co., keep constantly on hand
Kentucky Blue Grass, extra clean for Lawns,
Kentucky do. do. in strips,
Hemp seed,
Timothy,
Clover,
Orchard Grass,
Red Top.
All orders promptly attended to. MUNN & PETTIBONE,
206 Pearl St., N. Y., Agents.

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.
Sing Sing, N. Y. Jan. 2, 1845.—3 JOHN LUMSDEN.

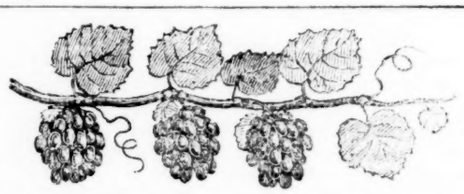
AGENTS FOR THE CULTIVATOR.

It would occupy too much room to give a full list of the Agents for the Cultivator. We would therefore state that all Postmasters are authorized to act as Agents, as well as all others who feel a sufficient interest in the circulation of our paper to induce them to act as Agents. We add a list of such Agents as have the back volumes for sale.

Auburn, N. Y.—J. C. Derby & Co. booksellers.
Alexandria, D. C.—Bell & Entwistle, booksellers.
Augusta, Geo.—C. A. Greenville & Co. booksellers.
Buffalo—T. S. Hawks, Periodical Depot.
Boston—E. Wight, Druggist.
A. D. Phelps, 124 Washington-street.
Baltimore—Dr. G. B. Smith.
Cincinnati, O.—W. H. Moore & Co. booksellers.
Erie, Pa.—T. S. Moorehead, Jr.
Halifax, N. S.—C. H. Belcher, bookseller.
Hartford, Ct.—E. W. Bull, Seedsman.
Louisville, Ky.—George, Lapping & Co. Seeds.
Montreal—John H. Scott and B. Brewster.
New-York—M. H. Newman, bookseller, 199 Broadway.
New-Haven, Ct.—J. M. Patten.
New-Orleans—W. M'Kean, bookseller.
A. Hodge, Jr. Esq.
Philadelphia—Landreth & Munns, Seedsmen.
Pittsburgh—J. W. Cook, bookseller.
Providence, R. I.—A. H. Stilwell, bookseller
Quebec, L. C.—J. Wheatley, Stationer
Rochester—D. B. Dewey, Arcade Hall
Richmond, Va.—R. Hill, Jr. & Co.
Rome, N. Y.—Comstock & Johnson.
Utica, N. Y.—Wm. Bristol, Druggist.
Washington City—J. F. Callan & Co. Seedsmen.
Wilmington, Del.—Jas. La Roche.

PROUTY & MEARS'

PATENT Centre Draught Self Sharpening Ploughs, from $9 $13 each—Subsoil Ploughs at $8, $10, and $12 each—Corn Planters $12 to $15—Straw Cutters in variety—Meat Cutters and Stuffers—together with every implement wanted on the farm or garden. Also a full assortment of Vegetable, Flower and Field Seeds, crop of 1844, warranted of the best quality and true to name; among them are several new and superior kinds, as Seymour's Giant Celery, Union Head Lettuce, &c. &c. Fruit Trees. Bulbous Roots, &c., for sale at the Philadelphia Agricultural Ware House and Seed Store, No. 194 1-2 Market Street, Phil'a, by D. O. PROUTY.
January 20—2t.



ISABELLA GRAPES, of proper age for forming Vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the Vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far North.) All communications, post paid addressed to R. T. UNDERHILL, M. D., 400 Broadway, New York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his Vineyards and Nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, and all the Western, Middle and Southern States.
January 20.—2t.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES,

Flushing, L. I., near New-York.

WILLIAM R. PRINCE & CO'S New Descriptive Catalogues of Fruit and Ornamental Trees and Plants (34th edition,) *with prices much below those usually charged*, and comprising additions of above 500 select varieties of Fruits, and 1200 varieties of Ornamental Trees, Shrubs and Roses, not in any other American Nursery, will be sent to every post paid applicant. The cost of the present edition, is above $700, and it is the most complete ever published.

Also, Prince's Treatise on Fruits, $2,00, and on the Vine, $1,50, and on Roses, 50 cents. Orders will be executed in a superior manner, and forwarded as ordered. WM. R. PRINCE & Co

Flushing, December, 1844—2t.

N. B. The public are cautioned against a spurious assumption of our title and name by Winter & Co.

HUSSEY'S REAPING MACHINE.

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Baltimore, Nov. 1844—4t